

HB CAMERON RIVER A-05

WELL **10-2** **RE CAMERON RIVER A-05**

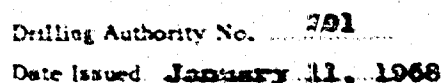
FIELD  
LOCATION: Unit **A** Area:  
Latitude **60 3 52.5** Section **05** Grid **60 1 0 117 30**  
From Established Reference Marker Longitude **117 30 14.06**

UMLR ~~60-06726-117-5076~~ 60.06726 117.5076 Rig Release Date:  
UNIT# **300A056010117300** Status

Information Release Date

CHANGE OF NAME:

| DATE RECEIVED      | INDEX                                                                  |
|--------------------|------------------------------------------------------------------------|
| 11 Jan 68          | Application for a Drilling Authority.                                  |
| <i>June 4/68</i>   | Well Completion Data.                                                  |
|                    | Well History Report.                                                   |
| 25 Jan 68          | Application to Amend a Drilling Authority.                             |
|                    | Application to change a Well Name.                                     |
| <i>April 16/68</i> | Application to Abandon a Well or Suspend Drilling.                     |
| <i>13-3-68</i>     | Application to Alter Condition of a Well.                              |
|                    | Well History Supplement.                                               |
|                    | Well Completion Data.                                                  |
|                    | Work-over Report No. ....                                              |
|                    | Application to Commingle Production before Measurement.                |
|                    | Data for Back Pressure Test on Natural Gas Wells — Monograph 7 Method. |
|                    | Data for Back Pressure Test on Natural Gas Wells — Vitter's Method.    |
|                    | M.P.R. — Oil — Calculations.                                           |
|                    | New Oil Well Report.                                                   |
| <i>April 10/68</i> | New Gas Well Report.                                                   |
|                    | Well Inspection Report.                                                |
|                    | Rig Inspection Report.                                                 |
|                    | Battery Inspection Report.                                             |
|                    | Equipment Report.                                                      |
|                    | Well Card.                                                             |
|                    | New Service Well Report.                                               |
|                    | Monthly Water Flood Operations Report                                  |
|                    | Monthly Water Receipts and Disposal of Fluids Report                   |
|                    | Logs. Large scale ..... Small scale .....                              |



## WELL COMPLETION DATA

To be submitted in duplicate within thirty days after the completion, rework, abandonment, recompletion or suspension of every well.

Well name and number **103 Cameron Hills A-03**

Permit No. 3214

Lease No. \_\_\_\_\_

Hudson's Bay Oil and Gas Co. Ltd. Exploratory Licence No. 1182  
(Permittee, Licensee, Lessee)

Hudson's Bay Oil and Gas Co., Ltd. Exploratory Licence No. 1182  
(Overseer)

Location: Unit: **A**

Section 5

Grid 60° 10' N.; 117° 30' W.

Latitude 00° 04' 02.13" N.

Longitude 117° 30' 5.41" E.

From Established Reference Marker Survey Vibrator Points 1283 & 1290 on line 60° 04' N.

Universal Well Location Reference 60.06726° N. Latitude, 117.30762° E. Longitude

|                      | DATE    | DEPTH      | Pool(s)                                        | Slave Point Formation         |
|----------------------|---------|------------|------------------------------------------------|-------------------------------|
| Spudded              | 1/28/68 |            | Interval(s) open to production                 | 4,391-4,406)                  |
| Suspended            | 4/16/68 |            |                                                | 4,409-4,412) - feet K.B. GEN  |
| Resumed Operations   | -       |            |                                                | 4,421-4,424) log measurements |
| Finished Drilling    | 2/21/68 | 4,969' KB. |                                                | 4,428-4,431)                  |
| Plug back depth      |         | 4,966' KB. |                                                |                               |
| Deepened             |         | 4,391-     | Elevation: Gr. 2,343' K.B. 2,355.53'           |                               |
| Complete (gas/oil)   | 3/19/68 | 4,431' KB. | Rig No. 1 E                                    |                               |
| Abandoned            |         |            | Drilling Contractor S&T Drilling Company, Ltd. |                               |
| Rig released         | 2/24/68 | 4,969' KB. | Contractor's Business Licence No. 4 11167      |                               |
| Service Rig Released | 3/19/68 |            |                                                |                               |

## CASING RECORD

|    | Casing Size (Inches) | Grade | Weight  | Amount    | Set at -       | Sacks of Cement and Additives |
|----|----------------------|-------|---------|-----------|----------------|-------------------------------|
| 1. | 8 3/8"               | J-55  | 24 lb.  | 815.90'   | 856' KB.       | 465 + 2% CaCl <sub>2</sub>    |
| 2. | 3 1/2"               | J-55  | 14 lb.  | 4,957.65' | 4,969' KB.     | 220 + 2% Gel                  |
| 3. | Tubing               |       |         |           |                |                               |
| 4. | 2 7/8"               | J-55  | 6.3 lb. | 4,285.03' | 4,295.58' L.B. |                               |
| 5. |                      |       |         |           |                |                               |
| 6. |                      |       |         |           |                |                               |

| GEOLOGICAL TOPS  | ELEVATION |         | CORE RECORD |                               |      |       |       |      |
|------------------|-----------|---------|-------------|-------------------------------|------|-------|-------|------|
|                  | Depth     | Sub-Sea | From        | To                            | Rec. | From  | To    | Res. |
| Nabassin         | 1,820     | + 736   | 4,443       | 4,303                         | 60.0 |       |       |      |
| Fort Simpson     | 2,362     | + 194   | 4,602       | 4,627                         | 24.0 |       |       |      |
| Slave Point      | 4,360     | -1,804  | 4,873       | 4,908                         | 33.0 |       |       |      |
| Natt Mountain    | 4,516     | -1,960  | 4,909       | 4,949                         | 40.0 |       |       |      |
| Bistcho          | 4,368     | -2,012  |             |                               |      |       |       |      |
| Huskeg           | 4,605     | -2,049  |             |                               |      |       |       |      |
| Keg River        | 4,795     | -2,240  | LOG RECORD  |                               |      |       |       |      |
| Louder Keg River | 4,862     | -2,306  | Run No.     | Type of Log                   |      | From  | To    |      |
| Chinchaga        | 4,945     | -2,389  | 1           | Induction Electrical          |      | 4,969 | 826   |      |
|                  |           |         | 1           | Borehole Compensated Sonic    |      | 4,968 | 826   |      |
|                  |           |         | 1           | Sidewall Neutron Porosity     |      | 4,969 | 826   |      |
|                  |           |         | 1           | Compensated Formation Density |      | 4,969 | 4,250 |      |
|                  |           |         | 1           | Gamma Ray Neutron             |      | 4,250 | 4,968 |      |

| CEMENTING RECORD (Plug, Squeeze, etc.) |      |    |         | PERFORATING RECORD (Bullet, Jet) |                                  |                                  |                                            | SERVICING RECORD (Acidizing, Fracing, etc.) |       |       |                                                       |
|----------------------------------------|------|----|---------|----------------------------------|----------------------------------|----------------------------------|--------------------------------------------|---------------------------------------------|-------|-------|-------------------------------------------------------|
| Date                                   | From | To | Remarks | Date                             | From                             | To                               | Remarks                                    | Date                                        | From  | To    | Remarks                                               |
|                                        |      |    |         | 3/18/68                          | 4,391<br>4,409<br>4,431<br>4,428 | 4,400<br>4,412<br>4,424<br>4,431 | 1 11/16" Through<br>tubing tornado<br>Jet. | 3/19/68                                     | 4,391 | 4,431 | acidized with 1000<br>gallons 15 percent<br>HCl acid. |

# DRILL STEM TESTS

| No.                                                                                                                                                      | Date    | Formation   | From  | To    | V.O.<br>Mins. | I.S.I.<br>Mins. | F.S.I.<br>Mins. | I.S.I.B.H.P. | F.S.I.B.H.P. | L.F.B.H.P. | F.F.B.H.P. | L.H.P. | F.H.P. | REMARKS                                                                                  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-------------|-------|-------|---------------|-----------------|-----------------|--------------|--------------|------------|------------|--------|--------|------------------------------------------------------------------------------------------|
| 1                                                                                                                                                        | 2/12/68 | Slave Point | 4,379 | 4,443 | 65            | 45              | 30              | 1,074        | 1,049        | 347        | 631        | 2,233  | 2,215  | G.I.P., GTS in 3 mins., string ran blow at 1.2 MACHD increasing to 2 MACHD. No Recovery. |
| 2                                                                                                                                                        | 2/14/68 | Hatcho      | 4,373 | 4,002 | 65            | 30              | 30              | 1,379        | 1,243        | 434        | 353        | 2,327  | 2,321  | G.I.P., GTS in 4 mins., 1 MACHD, Recovered 30 feet sulphurous water.                     |
| 3                                                                                                                                                        | 2/18/68 | Keg River   | 4,843 | 4,875 | 65            | 30              | 30              | 1,513        | 1,306        | 399        | 454        | 2,372  | 2,343  | GTS in 4 mins., 1 MACHD, Recovered 15 feet sulphurous gas-cut mud.                       |
| 4                                                                                                                                                        | 2/19/68 | Keg River   | 4,873 | 4,003 |               |                 |                 |              |              |            |            |        |        | Miarun                                                                                   |
| 5                                                                                                                                                        | 2/20/68 | Keg River   | 4,876 | 4,009 | 65            | 40              | 30              | 1,445        | 1,493        | 76         | 85         | 2,571  | 2,521  | Good blow, GTS in 3 mins., 0.3 MACHD. Recovered 110 feet sulphurous gas-cut mud.         |
| * As no pressure reading is recorded for the F.H.P., in the service report for the Bottom Recorder, the F.H.P. as recorded by the top recorder was used. |         |             |       |       |               |                 |                 |              |              |            |            |        |        |                                                                                          |

| ANALYSIS  |        |       |       |            | PRESENT STATUS OF WELL |     |     |       |            |
|-----------|--------|-------|-------|------------|------------------------|-----|-----|-------|------------|
| Lab. No.  | Sample | From  | To    | Source     | Oil                    | Gas | Dry | Susp. | Remarks    |
| E68-0070  | Gas    | 4,372 | 4,002 | BSF #2     |                        |     |     |       |            |
| E68-0085  | Gas    | 4,845 | 4,875 | BSF #3     |                        |     |     |       |            |
| E68-0086  | Gas    | 4,876 | 4,909 | BSF #5     |                        |     |     |       |            |
| E68-0447  | Gas    | 4,391 | 4,431 | Separator  |                        |     |     |       |            |
| E68-0448  | Fluid  | 4,391 | 4,431 | Separator  |                        |     |     |       |            |
| E68-0474  | Oil    | 4,391 | 4,431 | Separator  |                        |     |     |       |            |
| E68-0474  | Water  | 4,391 | 4,431 | Separator  |                        |     |     |       |            |
| E68-09106 | Core   | 4,443 | 4,503 | Core No. 1 |                        |     |     |       |            |
|           |        | 4,622 | 4,627 | Core No. 3 |                        |     |     |       |            |
|           |        | 4,875 | 4,908 | Core No. 3 |                        |     |     |       |            |
|           |        | 4,909 | 4,949 | Core No. 4 |                        |     |     |       |            |
|           |        |       |       |            |                        |     |     | X     | (Interval) |

Company **Hudon's Bay Oil and Gas Company Limited**

Signed by **[Signature]**

Title **District engineer**

Date **June 4, 1968**

Forms to be prepared in duplicate and forwarded to the Oil Conservation Engineer, Calgary, Alberta.





File No.  
Drilling Authority No.

291

DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT  
RESOURCE MANAGEMENT DIVISION

Application to ~~Abandonment~~ Suspend Drilling

In compliance with the "Canada Oil and Gas Land Regulations", application is hereby made for approval to ~~abandonment~~ to suspend drilling:—

Name and number of well KB Cameron Hills -05

Location: Unit 60° 04' 02.15" N. Section 5

Latitude 60° 04' 02.15" N.

Grid 60° 10' N; 117° 30' W  
Longitude 117° 30' 27.44" W

From Established Reference Marker Survey Vibrator Points 1285 & 1290

Universal WGS 84 Location Reference 60.06726° N. Latitude, 117.50753° W. Longitude

Permit No. 3-14 Lease No. HUDSON'S BAY OIL AND GAS COMPANY LIMITED

HUDSON'S BAY OIL AND GAS COMPANY LIMITED

(Operator, Lessee, Licensee)

Date of commencement of proposed program No Program (Suspended gas well, waiting on market).

OIL, GAS, AND WATER ENCOUNTERED  
(Depths)

Oil at 4380-4443, 4572-4602, 4845-4875, 4875-4909 feet KB

Gas at (From Drill Stem Test Results)

Water at 4969 Date of last operations March 30, 1968

Total Depth 4969  
Present condition of well temporarily shut-in gas well completed in the Slave Point Formation.

CASING RECORD

| Casing Size O.D. Inches | Weight | Amount   | Set At—     | Sacks of Cement and Additives | Amount Pulled |
|-------------------------|--------|----------|-------------|-------------------------------|---------------|
| 1. 8 5/8"               | 24.0#  | 815.90'  | 830' KB     | 465 - 2% CaCl <sub>2</sub>    |               |
| 2. 5 1/2"               | 14.0#  | 4957.95' | 4969' KB    | 220 - 2% Gel                  |               |
| 3. Tubing               |        |          |             |                               |               |
| 4. 2 7/8                | 6.5#   | 4278.28  | 4295.58' KB |                               |               |
| 5.                      |        |          |             |                               |               |

PROPOSED ABANDONMENT PROGRAM

| Plug |          | Geological Formation | Number of Sacks of Cement | Remarks |
|------|----------|----------------------|---------------------------|---------|
| No.  | Position |                      |                           |         |
|      |          |                      |                           |         |
|      |          |                      |                           |         |
|      |          |                      |                           |         |
|      |          |                      |                           |         |
|      |          |                      |                           |         |
|      |          |                      |                           |         |
|      |          |                      |                           |         |
|      |          |                      |                           |         |
|      |          |                      |                           |         |

The following logs have been run NP, TDC, LSS, BHC -GR, GRU  
Other operations proposed None

Operations to be carried out by Hudson's Bay Oil & Gas Contractor Licence No.

Address 11630-116th Ave., Edmonton, Alta Address

Responsible Agent in field Norm Dease

Dated at Edmonton this 10 Day of April 19 68

Signed by [Signature] Company Hudson's Bay Oil & Gas Co. Ltd.

Title District Superintendent Operator's Exploratory Licence No. 1182

Note:—The Oil Conservation Engineer's office must be notified before work is commenced.

(For RESOURCE MANAGEMENT DIVISION use only)

APPROVAL

This application has been examined and proposed programme approved, subject to the following conditions:

Dated 10th April, 19 68

[Signature]  
Oil Conservation Engineer

Forms to be submitted in triplicate to Oil Conservation Engineer,  
Department of Indian Affairs and Northern Development, Calgary, Alberta.



Drilling Authority No. 291  
File No.

DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT  
RESOURCE MANAGEMENT DIVISION

NEW GAS WELL REPORT

Well name KB Cameron Hills A-05  
Location: Unit 5 Section 5 Grid 60°10'N 117°30'W  
Latitude 60°04'02.15"N Longitude 117°30'27.44"W  
From Established Reference Marker Survey Vibrator Points 1285 & 1290 on line  
Elevation: 2543 feet Kelly Bushing 2555.55 feet 60°04'N

1. Field Wildcat Crown Private  
2. Pool Slave Point Formation Interval 4391 to 4431 feet KB  
3. Finished drilling date February 21, 1968  
4. Date of initial production or back-pressure test March 22, 1968 to March 29, 1968  
5. Initial shut-in well-head pressure 1449 psig  
6. Initial A.O.P. potential by production or back-pressure test 8.2 MM c.f./d.  
7. Date well placed on steady production Well shut-in waiting on market.  
8. Production during test period:—

| DATE                  | FLOW RATES<br>(MMCF/D) | HOURS<br>FLOWED | CONDENSATE<br>BARRELS | GAS<br>M.C.F. | WATER<br>BARRELS | * GAS-OIL<br>RATIO |
|-----------------------|------------------------|-----------------|-----------------------|---------------|------------------|--------------------|
| (a) 3/22/68           | 3.44                   | 8               | 0.2                   | 1,150         | -                | -                  |
| (b) 3/22/68           | 1.555                  | 8               | 0                     | 510           | 0                | 0                  |
| (c) 3/23/68           | 2.575                  | 20              | 1.2                   | 2,150         | 0                | 1,280,000          |
| (d) 3/23&24/          | 3.637                  | 8               | 2.4                   | 1,210         | 0                | 757,800            |
| (e) 3/24/68           | 5.548                  | 18              | 4.3                   | 4,160         | 0                | 1,156,000          |
| (f)                   |                        |                 |                       |               |                  |                    |
| (g)                   |                        |                 |                       |               |                  |                    |
| (h)                   |                        |                 |                       |               |                  |                    |
| (i)                   |                        |                 |                       |               |                  |                    |
| (j)                   |                        |                 |                       |               |                  |                    |
| (k)                   |                        |                 |                       |               |                  |                    |
| (l)                   |                        |                 |                       |               |                  |                    |
| (m)                   |                        |                 |                       |               |                  |                    |
| (n)                   |                        |                 |                       |               |                  |                    |
| (o)                   |                        |                 |                       |               |                  |                    |
| (p)                   |                        |                 |                       |               |                  |                    |
| (q)                   |                        |                 |                       |               |                  |                    |
| (r)                   |                        |                 |                       |               |                  |                    |
| Total test production |                        | 62              | 8.1                   | 9,180         | 0                | -                  |

Submitted on behalf of Hudson's Bay Oil and Gas Company Limited (Operator) Address 11630-Kingsway Ave., Edmonton, Alberta.

For Hudson's Bay Oil and Gas Company Limited (Owner)  
Date April 10, 1968 (Signed) District Superintendent

This form shall be submitted in duplicate to the Oil Conservation Engineer, Department of Indian Affairs and Northern Development, Calgary, Alberta, within seven days following the date well placed on steady production.



DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT  
RESOURCE MANAGEMENT DIVISION

# Application to Alter Condition of a Well

Notice of Intention to Resume Operations to Recondition,  
Deepen, Recomplete or Reopen a Suspended Well  
(Strike out words that are not applicable.)

In compliance with the "Canada Oil and Gas Land Regulations", application is hereby made for approval to:  
Type of operation Completion as a Slave Point gas well.  
Name and number of well Ed. Cameron Hills 4-03  
Location: Unit A Section 3 Grid 60° 10' N; 117° 30' W  
Latitude 60° 04' 02.15" N. Longitude 117° 30' 27.44" W.  
From Established Reference Marker Survey Vibrator Points 1285 & 1290 on line 60° 04' N  
Universal Well Location Reference 60.06726° N. Latitude, 117.50761° W. Longitude  
Permit No. 3214 Lease No. \_\_\_\_\_  
Permittee, Licensee, Lessee Hudson's Bay Oil and Gas Company Limited

## OIL, GAS, AND WATER ENCOUNTERED

(Optional)

Oil at \_\_\_\_\_  
Gas at 4380-4443, 4572-4602, 4845-4875, 4876-4909 feet KB.  
Water at \_\_\_\_\_  
Total depth 4969 feet KB. Date of last operation February 24, 1968  
Present condition of well Cased but not perforated. The hole is filled with  
inhibited water topped with diesel fuel.

## CASING RECORD

| Casing Size (Inches) | Weight       | Amount         | Set at—         | Sacks of Cement and Additives    | Amount Paid |
|----------------------|--------------|----------------|-----------------|----------------------------------|-------------|
| 1. <u>8 5/8</u>      | <u>24.04</u> | <u>815.90'</u> | <u>830' KB</u>  | <u>465 + 2% CaCl<sub>2</sub></u> |             |
| 2. <u>5 1/2</u>      | <u>14.04</u> | <u>4934'</u>   | <u>4969' KB</u> | <u>220 + 2% Gel</u>              |             |
| 3.                   |              |                |                 |                                  |             |
| 4.                   |              |                |                 |                                  |             |
| 5.                   |              |                |                 |                                  |             |
| 6.                   |              |                |                 |                                  |             |

## OPERATION PROPOSED

(If more space is required, attach additional sheet)

Program of operations - (Plugs, perforations, rework, etc.) (1) Move on service rig (2) Run casing  
scraper (3) Run 2 7/8" OD, 6.34 tubing with packer (4) Displace annulus to  
inhibited water (5) Run GRM log (6) Swab to 2000 feet (7) Perforate w/2  
JTF the selected Slave Point interval (8) Flow to clean up scrubbing if  
necessary (9) Acidize w/1000 gal. 15% HCl (10) Release rig (11) Conduct  
40F test. & Gas Company Limited

Operations to be carried out by Hudson's Bay Oil Contractor's Business Licence No. \_\_\_\_\_  
Address 11630-Kingway Avenue, Edmonton, Alberta.  
Responsible agent in field N. Deane Address 11630-Kingway Avenue, Edm.  
Dated at Edmonton, this 29 day of February 19 68  
Signed by [Signature] Company Hudson's Bay Oil & Gas Company Ltd.  
Title District Superintendent Operator's Exploratory Licence No. 1182

Note:—The Oil Conservation Engineer's office must be notified before work is commenced.

(For RESOURCE MANAGEMENT DIVISION use only)

## APPROVAL

This application has been examined and program of operations approved, subject to the following conditions:

Confidential oral approval given by Mr. B.E.J. Thoms  
on the 28th of February 1968.

Dated 13th March, 19 68

[Signature]  
Oil Conservation Engineer

Forms to be submitted in triplicate to Oil Conservation Engineer,  
Department of Indian Affairs and Northern Development, Calgary, Alta.

File No. \_\_\_\_\_  
Drilling Authority No. 291



DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT  
RESOURCE MANAGEMENT DIVISION

## Application to Amend a Drilling Authority

This application, in triplicate, must be submitted and approved before commencing operations. If the well location is changed, this application must be accompanied where required, with a plan of survey approved by the Surveyor General.

In compliance with the "Canada Oil and Gas Land Regulations", application is hereby made to amend  
Drilling Authority No. **291**, concerning **the drilling of HB Cameron Hills**

**AcS. A-05**  
(Name and Number of Well)

The following amendments are required:

**Name: From HB Cameron River AcS to HB Cameron Hills AcS A-05**

**Location: From Latitude - 60 Deg. 3' 52.5" Longitude - 117 Deg.**

**30' 14.06" to Latitude 60 deg. 04' 02.15" Longitude**

**117 deg. 30' 27.44" - as per attached survey plan**

Reasons for the amendments: **Terrain of original drilling location was  
not suitable for drilling operations.**

Dated at **Edmonton**, this **23** day of **January**, 19**68**

Signed by

Title **District Superintendent**

Company **Hudson's Bay Oil and Gas Co. Ltd.**

(For Resource Management Division use only)

APPROVED

This application has been examined and approved subject to the following conditions:

The Company will submit to this office, on Tuesday of each week, the  
latest reports by radio on the progress of the well.

TELEPHONE REFERENCE: 300A05-6610117300

UNIVERSAL WELL LOCATION REFERENCE: 60.06725° N. Latitude: 117.50752° W. Longitude

Date **25th January**, 19**68**

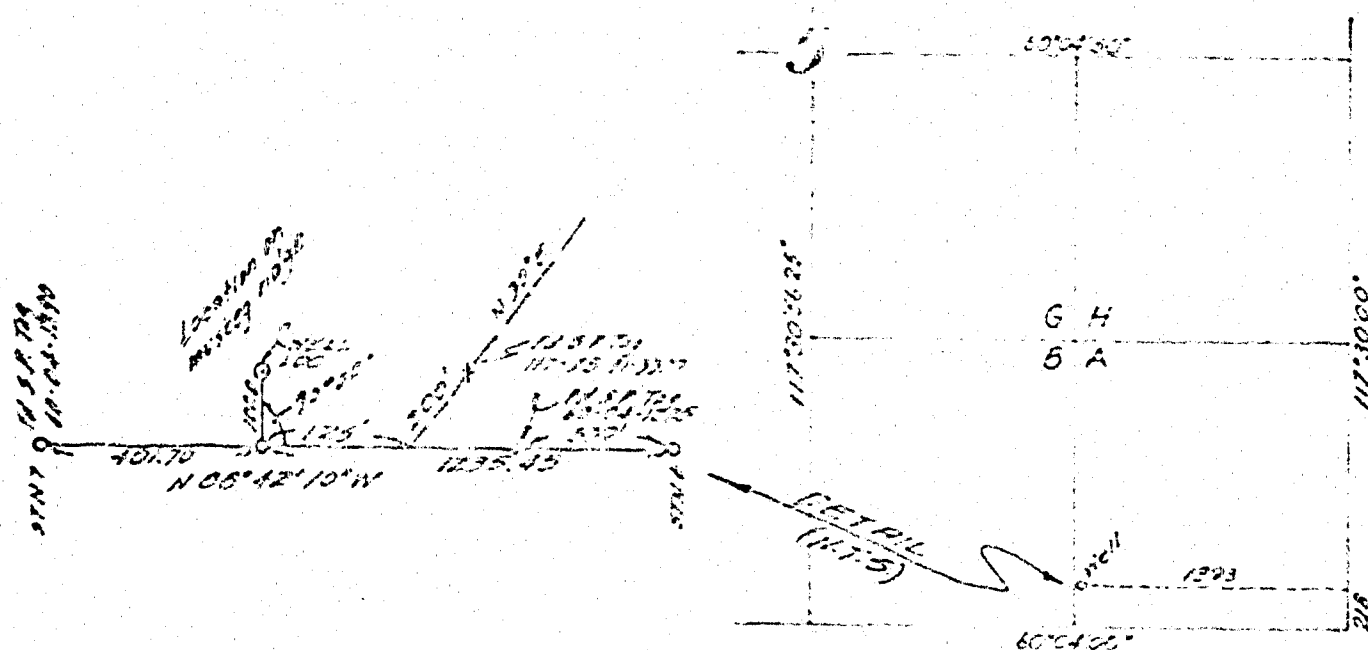
*B. H. Thomas*  
Oil Conservation Engineer

Form to be submitted to the Oil Conservation Engineer,  
Department of Indian Affairs and Northern Development, Calgary, Alberta.

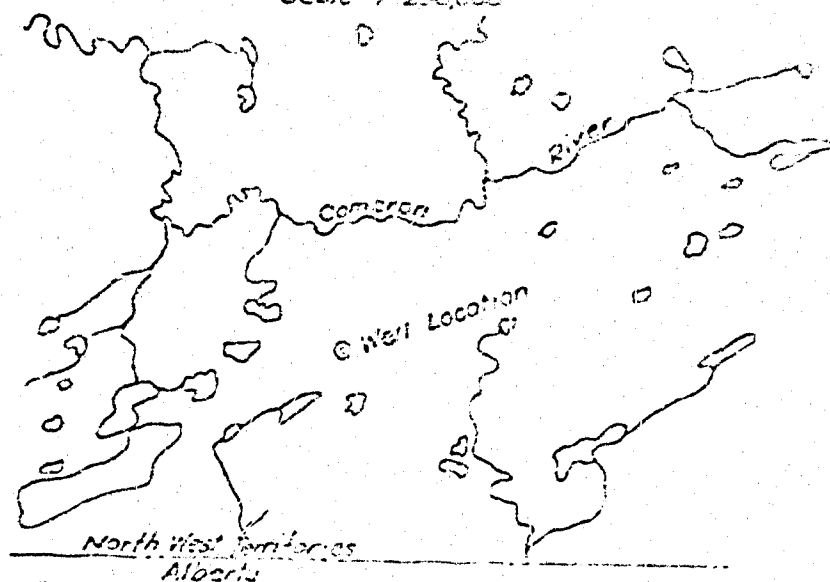
IND 1140 (Rev. 1-67)

Dept. of Indian Affairs (3), DGB, JCK, File

PRELIMINARY PLAN  
**HEB CAMERON HILLS A-05**  
 Unit A Section 5 Grid Area 60°10'117°30'  
 Latitude 60°04'02.15" Longitude 117°30'27.44"  
 NORTH WEST TERRITORIES



LOCATION PLAN  
 Scale 1:250,000



I certify that this plan is correct to the best of my knowledge and was completed on the 19<sup>th</sup> day of January, 1968.

*John D. L. L.*  
 Dominion of Alberta Land Surveyor

*[Signature]*  
 Witness

**MIDWEST SURVEYS CO. LTD.**

The Lewis Hay Oil and Gas  
 Company Limited

**ELEVATION: 2543 Ground**

**CO-ORDS:** Well is located 213.10 (of Section Unit A  
 1523W) Set 5

Scale 1:250,000  
 Interpretation Station  
 Well Location  
 Survey Measurements found shown this  
 plan  
 Survey Station  
 Survey Station

INDIAN AFFAIRS AND NORTHERN DEVELOPMENT  
DEPARTMENT OF MINES AND TECHNICAL SURVEYS  
RESOURCE MANAGEMENT DIVISION

Application for a Drilling Authority

This notice is intended to begin drilling operations, in triplicate, and where required a plan of survey approved by the Surveyor General showing the location and use of the well must be submitted and approved before commencing operations.

In compliance with the "Canada Oil and Gas Land Regulations", application is hereby made for approval to drill—

Name and number of well: **EB Cameron River P-64 13 2 3**  
Location: Unit **P** Section **4** and **60 Deg. 10' 117 Deg. 30'**  
Latitude **60 Deg. 3' 52.5"** Longitude **117 Deg. 30' 14.06"**  
From Established Water well marker To be surveyed from Alberta -  
North West Territories Boundary.

Elevation: Ground To follow **N.D. To follow** feet above sea-level.  
Well is expected to produce from **Slave Point or Bistcho or Keg River** formation at a depth of about **4300, 4500 & 4700** feet respectively

Area assigned to well (For Oil Conservation Department use only)

Permit No. **3214** Lease No. **63854**

Permittee, lessee, or lease: **Hudson's Bay Oil and Gas Company Limited**

Exploratory License No. **1182**

Surface owned by Crown or **Crown**

Petroleum and natural-gas rights owned by **Crown**

We propose to use the following strings of casing, either cementing or landing them as indicated below—

| Casing P.D. (Inch) | Weight (LBS/FT) | Grade       | Joint           | New or Used | Estimated Depth | Size of Cement |
|--------------------|-----------------|-------------|-----------------|-------------|-----------------|----------------|
| 1. <b>8 5/8</b>    | <b>24</b>       | <b>J-55</b> | <b>Seamless</b> | <b>New</b>  | <b>520</b>      | <b>500</b>     |
| 2.                 |                 |             |                 |             |                 |                |
| 3.                 |                 |             |                 |             |                 |                |
| 4.                 |                 |             |                 |             |                 |                |
| 5.                 |                 |             |                 |             |                 |                |

Expected water, gas, and oil horizons and type of control equipment

**Slave Point, Bistcho and Keg River**

**Double gate blow-out preventor and Hydrill plus adequate mud system.**

Well will be drilled with (Primary) Rig No. **1** by **S & T Drilling**  
(Cable) (Drilling Contractor or company)

**5825 - 98 Street, Edmonton, Alberta**

Responsible agent of applicant— Contractor's Business Licence No. **242234**

At well **N. Dease** At registered office **N. Dease**

Address **11630 Kingsway Ave.** Address **11630 Kingsway Ave.**

It is understood that if changes become necessary, notice of the change of plan will be submitted.

Dated at **Edmonton** the **8** day of **January** 19 **68**

Signed by **J. C. Koch** Company **Hudson's Bay Oil and Gas Co. Ltd.**

The District Superintendent Operator's Licence No. **1182**

(For Resource Management Division use only)

APPROVED

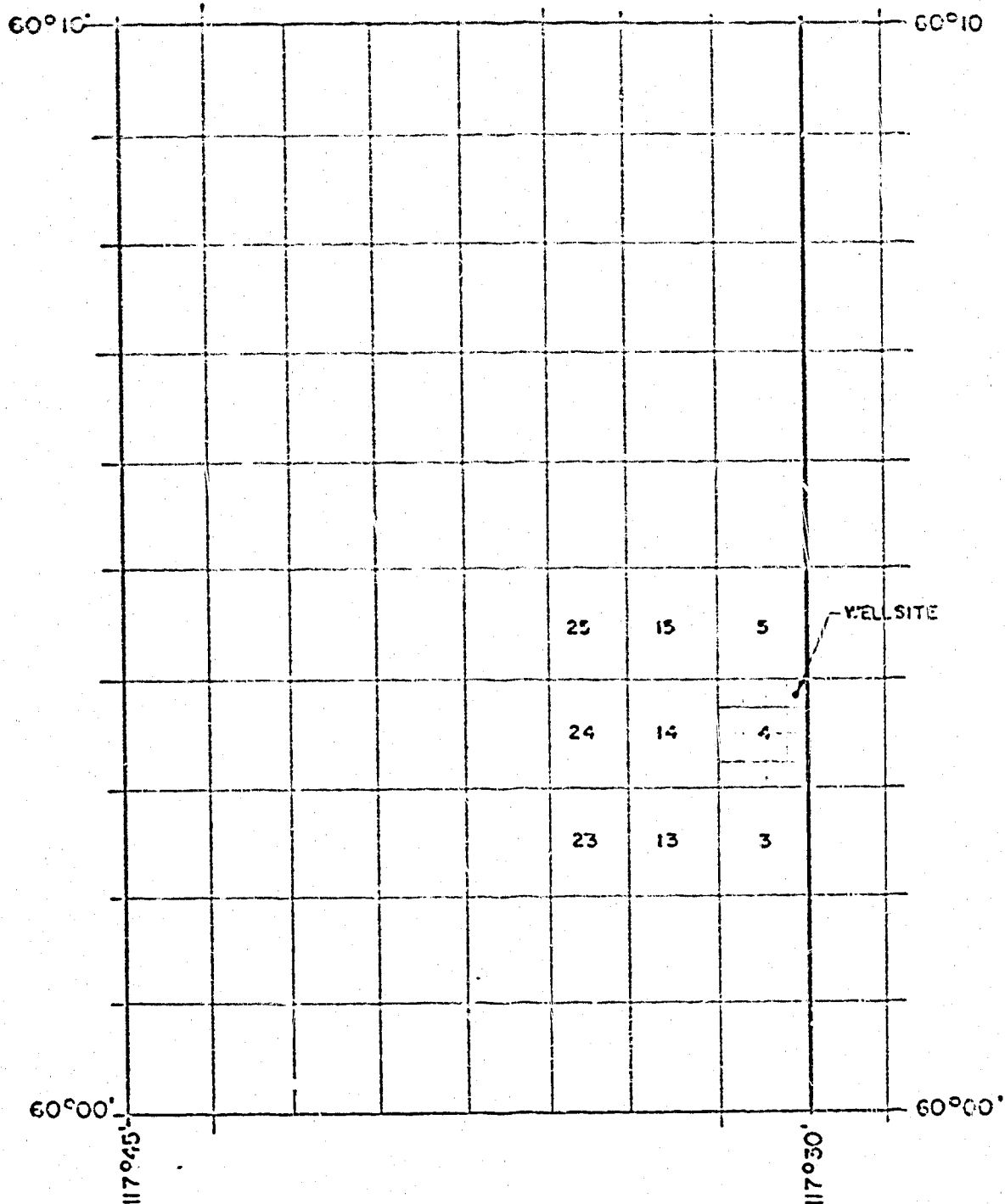
This application has been examined and approved subject to the following conditions—  
**The Company will submit to this office, on Tuesday of each week, the latest reports received by radio on the progress of the well.**

Dated **11th January** 19 **68**

*B. S. Thomas*

Universal Well Location Reference - Lat. **60.06458° N.**  
Long. **117.50391° W.**

Unique Well Identifier - **30CP046010117300**



HUDSON'S BAY OIL AND GAS COMPANY LIMITED

*[Signature]*

PRODUCTION ENGINEER

*[Signature]*

DISTRICT ANALYST

Hudson's Bay Oil and Gas Company Limited  
Production Dept. Edmonton District

CAMERON HILLS

PLAN SHOWING PROPOSED WELLSITE

HB CAMERON RIVER P-4

Loc. N.E. Ref. Cor. 60°10' & 117°30'

Scale 1" = 2 mi.

Drawn DDW

Drawing no.

Date DEC. 22/57

Checked

HUDSON'S BAY OIL AND GAS CO. LTD.

WELL HISTORY REPORT

HB Cameron Hills A-05

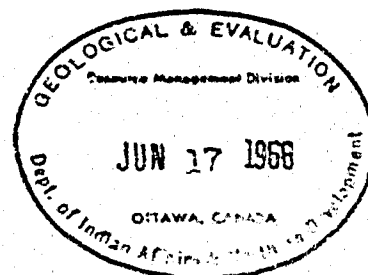
APRIL 1968



HUDSON'S BAY OIL AND GAS COMPANY LIMITED

WELL HISTORY REPORT

WE CAMERON HILLS A-03



SIGNED: \_\_\_\_\_

*[Signature]*  
DISTRICT SUPERINTENDENT

DATE: \_\_\_\_\_

*April 26, 68*

## I N D E X

|         |     |                      |                 |
|---------|-----|----------------------|-----------------|
| SECTION | I   | Summary of Well Data | Page 1          |
| SECTION | II  | Geological Summary   | Pages 1 to 8    |
| SECTION | III | Engineering Summary  | Pages 9 to 12   |
| SECTION | IV  | Logs                 | Page 13         |
| SECTION | V   | Analysis             | Pages 14 and 15 |
| SECTION | VI  | Completion Summary   | Pages 16 and 17 |

WELL HISTORY REPORT

SECTION 1 - Summary of Well Data

- (a) Well Name - 28 Cameron Hills A-05
- (b) Permitter, Licensee, Lessee - Hudson's Bay Oil and Gas Company Limited
- (c) Name of Operator - Hudson's Bay Oil and Gas Company Limited
- (d) Location - Unit A, Section 5, Grid 60° 10' N; 117° 30' W  
Latitude 60° 01' 02.15" N  
Longitude 117° 30' 27.44" W
- (f) Permit or Lease Number - 3211
- (g) Drilling Rig Contractor - S&T Drilling Company Limited  
Rig No: 1 E  
Type: National 30 AE  
Service Rig Contractor - (for well Completion)  
Beta Well Services Limited  
Rig No: 27  
Type: Cooper Model TC-58-58  
Double Drum
- (h) Drilling Authority - No. 291 dated 11th January 1968.  
Amendment to the Drilling Authority issued: January 25, 1968
- (i) Classification - Exploratory, License No. 1182
- (j) Elevations - Ground 2545 feet  
K.B. 2555.55 feet
- (k) Spudded - January 28, 1968
- (l) Completed drilling - February 21, 1968
- (m) Total Depth - 4969 feet K.B.  
Plugged Back Depth - 4966 feet K.B.
- (n) Well Status - Temporary shut-in Slave Point Gas Well
- (o) Drilling Rig Released - February 24, 1968  
Service Rig Release - March 19, 1968
- (p) Hole Size - 12 1/4 inches - 0' - 830'  
7 7/8 inches - 830' - 4969'
- (q) Casing - Surface casing - 8 7/8 inch, set to 850 feet K.B.  
Production Casing - 5 1/2 inch set at 4969 feet K.B.
- (r) Universal Well Location Reference - Lat. 60.06726° N., Long. 117.50762°W.
- (s) Unique Well Identifier - 300A056010117300

## SECTION II - Geological Summary

### (a) Formation Tops - by Sonic Log

| <u>Formation Marker</u> | <u>Depth (ft-K.B.)</u> | <u>Elevation (ft.)</u> |
|-------------------------|------------------------|------------------------|
| Wabumun                 | 1,820                  | + 756                  |
| Fort Simpson            | 2,362                  | + 194                  |
| Slave Point             | 4,360                  | -1,804                 |
| Watt Mountain           | 4,516                  | -1,960                 |
| Bistcho                 | 4,568                  | -2,012                 |
| Nuskeg                  | 4,603                  | -2,049                 |
| Keg River               | 4,796                  | -2,240                 |
| Lower Keg River         | 4,862                  | -2,306                 |
| Chinchaga               | 4,915                  | -2,389                 |

### (b) Cored Intervals

|         | <u>Interval (ft K.B.)</u> | <u>Formation</u> | <u>Recovery (ft.)</u> |
|---------|---------------------------|------------------|-----------------------|
| Core #1 | 4,445 - 4,505             | Slave Point      | 60.0                  |
| Core #2 | 4,602 - 4,627             | Bistcho          | 24.0                  |
| Core #3 | 4,875 - 4,908             | Keg River        | 33.0                  |
| Core #4 | 4,909 - 4,949             | Keg River        | 40.0                  |

### (c) Core Descriptions

CORE #1 4445 - 4505 - Recovery 60 feet

Coring Times - 9, 10, 10, 9, 9, 8, 10, 9, 7, 12, 9, 8, 10,  
10, 11, 11, 12, 10, 12, 10, 10, 10, 13, 11, 9, 9, 10,  
9, 12, 13, 10, 9, 8, 8, 9, 15, 10, 10, 10, 11, 10,  
10, 12, 11, 10, 12, 11, 10, 8, 7, 8, 10, 10, 11, 10,  
9, 12, 12, 14, 13.

| <u>Interval</u> | <u>Description</u>                                                                                                                                                                                |
|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 5.5'            | Ls. m. brn. micro-xln. pelletal i/pt. styl. stroms. amphis. tr. poor p.p. poro. weak oil bleed. Secondary calcite destroying much of the porosity.                                                |
| 16.0'           | Ls. m. to dk. brn. micro. to f. xln. pelletal i/pt. styl. occ. hairline sh. pting. (horizontal) occ. foss. frag. (brac.) tr. py. bec. f. xln. where pelletal. pelletal lenses to 6" in thickness. |
| 1.9'            | Anhy. m. to lt. brn. crypto to micro. xln. occ. brac sub. fiss.                                                                                                                                   |
| 5.0'            | Ls. m. to dk. brn. micro to m. xln. pelletal, ls. mud i/pt. sl. arg. i/pt. ti.                                                                                                                    |
| 1.5'            | Anhy. m. brn. micro. xln. v. arg.                                                                                                                                                                 |

Core #1 - continued

|       |                                                                                                      |
|-------|------------------------------------------------------------------------------------------------------|
| 2.5'  | Ls. lt. gy. brn. crypto. xln. massive occ. hairline sh. pting. gen. ti.                              |
| 0.5'  | Ds. dk. brn. micro. xln. v. arg. massive; ti.                                                        |
| 2.3'  | Ls. lt. gy. brn. crypto. xln. f. to c. xln. i/pt. massive occ. foss. frag. gen. ti.                  |
| 4.0'  | Ls. m. to dk. brn. micro. to f. xln. amphis. stroms. at top of unit. arg. gen. ti.                   |
| 3.7'  | Anhy. m. brn. f. xln. to micro. xln. dol. i/pt.                                                      |
| 5.1'  | Ls. m. to dk. brn. f. xln. to c. xln. i/pt. v. arg. Ls. mud sl. pelletal i/pt. occ. amphis. gen. ti. |
| 12.5' | Ds. micro. xln. to crypto. xln. chalky i/pt. v. arg. gen. ti. weak. O.A.R.                           |

CORE #2 4602 - 4627 - Recovery 21 feet

Coring Times - 10, 7, 6, 7, 7, 6, 5, 7, 7, 7, 6, 6, 6, 9, 14, 15, 13, 13, 10, 8, 12, 15, 14, 14, 11.

Interval

Description

|      |                                                                                                                                                  |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.1' | Ls. graish. brn. v. arg. crinoids. amphis. frags. abund. py. thin 1" sh. break at base of unit.                                                  |
| 1.3' | Ds. lt. brn. micro. xln. v. anhy. 10% pelletal weak O.A.R.                                                                                       |
| 2.0' | Ds. m. to dk. brn. f. xln. 90% pelletal v. p. i/xln. and pp. poro. some oil bleed, secondary Anhy. infilling. thin 1" sh. break at base of unit. |
| 1.5' | Anhy. m. to lt. gy. micro. xln.                                                                                                                  |
| 2.8' | Ds. brn. f. xln. v. arg. v. anhy. gen. ls. mud.                                                                                                  |
| 3.8' | Ds. brn. f. to m. xln. poro. heavy oil bleed.                                                                                                    |
| 5.1' | Anhy. lt. gy. micro. xln.                                                                                                                        |
| 1.7' | Ds. m. brn, f. to m. xln. pelletal (95%) sl. arg.                                                                                                |
| 4.7' | Anhy. m. to lt. gy. to lt. brn. micro. to v. f. xln. w/s/Ds. as. ab. near. base.                                                                 |

CORE #3 4875 - 4908 - Recovery 33 feet

Coring Times - 17, 13, 13, 8, 10, 10, 10, 9, 10, 9, 9, 14, 12,  
10, 11, 13, 13, 13, 18, 20, 18, 12, 12, 13, 11,  
10, 10, 10, 11, 9, 12, 12, 25.

| <u>Interval</u> | <u>Description</u>                                                                                                                                                                 |
|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2.0'            | Ds. dk. brn. v. f. to f. xln. occ. hairline stylol. some vert. fracturing. p. vug. and micro. vug. poro. some oil bleed.                                                           |
| 8.0'            | Ds. m. to dk. brn. v. f. xln. occ. hairline stylol. occ. thin sh. break. vert. frac. filled with secondary calcite, tr. scat. p. micro. vug. and pp. poro. tr. oil bleed, gen. ti. |
| 3.0'            | Ds. dk. brn. micro. to v. f. xln. occ. thin sh. breaks, tr. poor. vug. micro vug and pp. poro. scat. poor frac. poro. tr. oil bleed. vugs. gen. less than 1/8".                    |
| 4.0'            | Ds. dk. brn. micro. to v. f. xln. occ. hairline stylol. poor vug. and micro vug. poro. poor frac. poro. oil bleed, poor permeability (?) vugs to 1/2".                             |
| 10.0'           | Ds. m. brn. micro to f. xln. scatt. hairline stylol. scatt. poor micro. vug. poro. tr. oil bleed gen. ti sl. arg. i/pt.                                                            |
| 2.0'            | Ds. dk. brn. v. f. xln. p. to f. vug. micro. vug. micro. vug. and pp. poro. oil bleed, vugs. drusy, vugs. to 1/2" gen. less than 1/1", some frac. poro. scatt. amphis.             |
| 4.1'            | Ds. dk. brn. v. f. to f. xln. p. to f. vug. and micro vug. poro., gypsum xls. tr. frac. poro., vugs to 1/8", oil bleed.                                                            |

CORE #1 4909 - 4949 Recovery 40 feet

Coring Times - 24, 15, 12, 11, 12, 12, 12, 13, 13, 22, 18, 14,  
15, 18, 17, 16, 18, 14, 15, 13, 14, 15, 16, 14,  
18, 15, 15, 18, 16, 14, 15, 16, 14, 16, 16, 20,  
24, 20, 44, 45.

|      |                                                                                                                                          |
|------|------------------------------------------------------------------------------------------------------------------------------------------|
| 2.0' | Ds. m. brn., f. to m. xln., amphis., p. to f. vug. and micro vug. poro., gypsum xls., gypsum tends to destroy the porosity. s/oil bleed. |
|------|------------------------------------------------------------------------------------------------------------------------------------------|

Core #4 - continued

|       |                                                                                                                                |
|-------|--------------------------------------------------------------------------------------------------------------------------------|
| 6.5'  | Ds. m. to lt. brn., f. to m. xln., amphs. (scattered) styl. tr. p. frac. pore., tr. oil bleed. secondary dol., gen. ti.        |
| 1.5'  | Ds. m. to lt. gy. brn., x. xln. pelletal, occ. arg. stringer, tr. py. gen. ti.                                                 |
| 4.6'  | Ds. m. to dk. brn., micro to f. xln., v. arg. i/pt. tr. py., white secondary dol. filling thin hairline fractures, gen. ti.    |
| 10.0' | Ds. m. to lt. brn., v. f. xln., styl. pelletal, scattered amphs. thin sh. breaks, 1" sh. break at base of unit, secondary dol. |
| 5.7'  | Ds. m. brn. micro. xln., pelletal, amphs., hairline sh. breaks, gen. ti.                                                       |
| 4.5'  | Ds. m. to dk. brn., f. xln., arg. i/pt., intraclasts (?)                                                                       |
| 5.2'  | Qtzite, m. to lt. gy. abun. py. dolomitic near top.                                                                            |

(d) Sample Description

Samples were caught from surface to T.D. at 10 foot intervals (Samples from surface to 1100 feet were not washed properly and consequently of no value). One set of samples was placed in plastic vials for H.B.O.G. and one set was sent to the Dominion Government.

Note: Samples were lagged 1 minute per 100 feet to 3300 feet but were not lagged from 3300 feet to T.D.

| <u>Depth (ft K.B.)</u> | <u>Description</u>                                                                                                      |
|------------------------|-------------------------------------------------------------------------------------------------------------------------|
| 4010-4200              | Sh. m. to dk. grn. sl. calc. i/pt. sub. fiss. splintery to sub splintery bec. gryish grn. i/pt. tr. py. micromica i/pt. |
| 4300                   | Sh. as. ab. (90%) w/ls. lt. brn. crypto to micro. xln. tr. foss frags. (10%)                                            |
| 4310                   | Sh. as. ab. (90%) w/ls. m. to dk. brn. micro to crypto xln. v. arg.                                                     |
| 4320                   | Sh. as. ab. (85%) w/ls. as ab. occ. foss. frag. (15%)                                                                   |
| 4330                   | Sh. as. ab. (85%) w/ls. as. ab. tr. py.                                                                                 |

(d) Sample Description - continued

|                    |                                                                                                                                                                                       |
|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4340               | Sh. m. greenish. brn., v. calc., sub-platy. brittle, sl. carb. i/pt. chunky i/pt. micro-mica i/pt. (25%) w/ls. lt. gy. brn., crypto to v. f. xln. sl. arg., foss frags., tr. py. (5%) |
| 4350               | Sh. as. ab. (90%) w/ls. as. ab. (10%)                                                                                                                                                 |
| 4360               | Sh. as. ab. w/s/ls. as. ab.                                                                                                                                                           |
| 4370               | Sh. m. gy. grn., v. calc., sub-platy to platy, hd., micro-mica i/pt. (85%) w/ls. lt. greenish gy., tr. arg. py. foss. frags (15%).                                                    |
| 4380               | Sh. as. ab. (90%) w/ls. crypto to micro xln. (10%).                                                                                                                                   |
| 4390               | Ls. m. brn., crypto to micro xln., tr. arg., algal pelletal (90%) py. styl.                                                                                                           |
| Slave Point = 4390 |                                                                                                                                                                                       |
| 4400               | Ls. as. ab. pelletal (80%) chalky i/pt.                                                                                                                                               |
| 4410               | Ls. as. ab. pelletal (90%) sl. dolic. tr. p. to f. i/pell. poro. poor O.A.R.                                                                                                          |
| 4420               | Ls. as. ab. pelletal (90%) v. arg. i/pt. chalky i/pt. tr. p. pp. poro.                                                                                                                |
| 4430               | Ls. m. brn. crypto to v. f. xln. pelletal (95%) chalky i/pt. tr. p. to f. pp. and i/pell poro. Weak O.A.R.                                                                            |
| 4440               | Ls. as. ab.                                                                                                                                                                           |
| D.S.T. #1          | 4380 - 4443                                                                                                                                                                           |
| 4443- 4503         | Core #1                                                                                                                                                                               |
| 4510               | Ls. m. to lt. brn., crypto to v. f. xln., tr. arg. pelletal (25%) crinoids, Anhy. infillings, (75%), Anhy. lt. gyish, brn., f. xln. (25%)                                             |
| 4520               | Ls. lt. gy. brn. micro to v. f. xln. anhy.                                                                                                                                            |
| 4530               | Sh. m. grn. v. calc. chunky, sft. saxy, py.                                                                                                                                           |
| Watt Mtn. = 4513   |                                                                                                                                                                                       |
| 4540               | Sh. pale grn. sl. calc. chunky sft.                                                                                                                                                   |



(d) Sample Description - continued

|                |                                                                                                                                                              |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4530           | Sh. as. ab. bec. m. brn. i/pt.                                                                                                                               |
| 4560           | Sh. as. ab. abund. py.                                                                                                                                       |
| 4570           | Sh. as. ab. bec. m. to lt. brn. i/pt.                                                                                                                        |
| 4580           | Ls. m. brn. crypto to f. xln. tr. arg., tr. algal pellets.                                                                                                   |
| Bintcho = 4555 |                                                                                                                                                              |
| 4590           | Ds. m. brn., v. f. to m. xln., tr. algal pellets (20%) tr. p. pp. and i/xln. poro. strong O.A.R. tr. oil stn. i/pt.                                          |
| 4600           | Ds. as. ab. poor to excl. pp. micro vug. poro. strong O.A.R. oil stn. throughout.                                                                            |
| 4602 - 4627    | Core #2      Muskeg Anhy. = 4606                                                                                                                             |
| 4630           | Anhy. lt. brn. crypto xln.                                                                                                                                   |
| 4640           | Ds. lt. brn. micro to f. xln. sl. anhy. pelletal (75%) w/s/Anhy. as. ab. (10%).                                                                              |
| 4650           | Ds. lt. brn. crypto to micro xln. Anhy blebs i/pt. w/s/Anhy. lt. brn. to lt. gy. micro xln. (10%)                                                            |
| 4660           | Ds. as. ab. w/s/Anhy. as. ab. (20%)                                                                                                                          |
| 4670           | Ds. m. brn. micro to v. f. xln. pelletal i/pt. gypsum xls. scatt. p. to f. pp. micro vug., and i/xln. poro. weak O.A.R. w/s/Anhy. as. ab. m. gy. i/pt. (10%) |
| 4680           | Anhy. lt. brn. micro xln.                                                                                                                                    |
| 4690           | No sample.                                                                                                                                                   |
| 4700           | Anhy. as. ab.                                                                                                                                                |
| 4710           | Ds. m. brn. crypto to micro xln. sl. anhy. massive.                                                                                                          |
| 4720           | Anhy. m. to lt. brn. micro to crypto xln. w/s/ds. as ab. (10%)                                                                                               |
| 4730           | Anhy. as. ab.                                                                                                                                                |
| 4740           | Anhy. as. ab. (90%) w/s/ds. lt. brn. f. xln. pelletal i/pt.                                                                                                  |

(d) Sample Description - continued

|      |                                                                                                   |
|------|---------------------------------------------------------------------------------------------------|
| 4750 | Anhy. as. ab. (90%) w/s/ds. lt. to m. brn. f. to m. xln. (10%)                                    |
| 4760 | Anhy. as. ab. w/s/ds. gen. as. ab. (10%)                                                          |
| 4770 | Anhy. as. ab.                                                                                     |
| 4780 | Ds. m. brn. micro xln. sl. arg. i/pt. pelletal i/pt.                                              |
| 4790 | Ds. m. brn. crypto to micro xln. v. to sl. arg. chalky i/pt. styl. w/s/anhy. as. ab. (10%)        |
| 4800 | Anhy. as. ab. w/s/ds. as. ab. (10%)                                                               |
| 4810 | Ds. m. brn. micro to v. f. xln. pelletal w/s/anhy. as. ab. poor sample evgs.                      |
| 4820 | Anhy. as. ab. poor sample evgs.                                                                   |
| 4830 | Anhy. as. ab. w/s/ds. m. to dk. brn. crypto to v. f. xln. arg. i/pt. chalky i/pt. pelletal. (20%) |
| 4840 | Anhy. as. ab.                                                                                     |
| 4850 | Anhy. as. ab.                                                                                     |
| 4860 | Ds. m. brn. crypto to micro xln. pelletal earthy i/pt. w/s/anhy. as. ab. (15%)                    |
| 4870 | Ds. m. brn. v. f. xln. p. to f. i/xln. pore. tr. py.                                              |

Keg River = 4800

4875 - 4919 Core #3 and Core #4

Precambrian = 4945

4960 Qtzite. lt. gy. abun. py.

4970 Qtzite. as. ab. bec. wh.

**Note:**

The above reported tops were picked from samples and drilling times and may not coincide with the log tops

SECTION III - Engineering Summary

(a) Report of Drill Stem Tests - (Copies previously forwarded)

Chronological Summary of Drill Stem Tests

|                              | <u>DST Number<br/>1</u> | <u>DST Number<br/>2</u> | <u>DST Number<br/>3</u> |
|------------------------------|-------------------------|-------------------------|-------------------------|
| Formation:                   | Slave Point             | Distcho                 | Keg River               |
| Interval (Ft LB)             | 4,379-4,445             | 4,572-4,602             | 4,845-4,875             |
| Initial Flow Time (Mins):    | 5                       | 5                       | 5                       |
| Initial Shut in Time (Mins): | 45                      | 30                      | 30                      |
| Final Flow Time (Mins):      | 60                      | 60                      | 60                      |
| Final Shut in Time (Mins):   | 30                      | 30                      | 30                      |
| Initial Shut in Press (PSI): | 1674                    | 1379                    | 1312                    |
| Initial Flow Press (PSI):    | 517                     | 454                     | 389                     |
| Final Flow Press (PSI):      | 631                     | 353                     | 454                     |
| Final Shut in Press (PSI):   | 1619                    | 1242                    | 1506                    |
| I.H.P.                       | 2253                    | 2327                    | 2572                    |
| F.H.P.                       | --                      | 2321                    | 2543                    |

Flow Rate and Remarks

- DST No. 1 - Good initial puff. Gas to surface in 3 mins. Strong gas blow at 1.2 mmcf increasing to 2 mmcf in 20 mins. Steady throughout test.
- DST No. 2 - Good initial puff, gas to surface in 4 mins., increased to approximately 1 mmcf/d and stabilized.
- DST No. 3 - Gas to surface in 4 mins. Good gas flow throughout test. Approximately 1 mmcf/d

Pipe Recovery and Remarks

- DST No. 1 - Fine water spray after 5 mins. No recovery.
- DST No. 2 - 30 feet sulphurous water
- DST No. 3 - 15 feet sulphurous gas-cut mud

(a) Report of Drill Stem Tests - continued

Chronological Summary of Drill Stem Tests

|                              | DST Number<br>4 | DST Number<br>5 |
|------------------------------|-----------------|-----------------|
| Formation:                   | Keg River       | Keg River       |
| Interval (Ft KB):            | 4,873-4,903     | 4,876-4,900     |
| Initial Flow Time (Mins):    | -               | 3               |
| Initial Shut in Time (Mins): | -               | 40              |
| Final Flow Time (Mins):      | -               | 60              |
| Final Shut in Time (Mins):   | -               | 30              |
| Initial Shut in Press (PSI): | -               | 1445            |
| Initial Flow Press (PSI):    | -               | 76              |
| Final Flow Press (PSI):      | -               | 85              |
| Final Shut in Press (PSI):   | -               | 1493            |
| I.H.P.                       | -               | 2571            |
| P.H.P.                       | -               | 2521            |
| <u>Flow Rate and Remarks</u> |                 |                 |

DST No. 4 - Misrun. Tight hole test.

DST No. 5 - Good blow. Gas to surface in 3 mins. 1/2 mmcf throughout test.

Pipe Recovery and Remarks

DST No. 4 - Misrun. Tight hole test.

DST No. 5 - 110 feet sulphurous gas-cut mud.

(b) Casing Record

Surface Casing: 8 5/8 inch, 24 lb., J-55, ST&C set to 830 feet K.B., 465 sacks cement + 2%  $\text{CaCl}_2$

Production Casing: 5 1/2 inch, 14 lb., J-55, ST&C set to 4969 feet Kb., 220 sacks cement + 2% Gel

(c) Bit Record

| <u>No.</u> | <u>Serial No.</u> | <u>Type</u>  | <u>Size (inches)</u> | <u>Footage</u> | <u>Hours Run</u> |
|------------|-------------------|--------------|----------------------|----------------|------------------|
| 1A         | MA836             | OSC-3J       | 12 1/4               | 115            | 8.25             |
| 2A         | 264035            | OSC-3J       | 12 1/4               | 523            | 19.50            |
| 3A         | 89582             | OSC-3J       | 7 7/8                | 597            | 16.00            |
| 1          | 94468             | XIG          | 7 7/8                | 853            | 14.00            |
| 2          | 89566             | XIG          | 7 7/8                | 623            | 42.00            |
| 3          | 94493             | XIG          | 7 7/8                | 549            | 26.75            |
| 4          | 50725             | S4T-J        | 7 7/8                | 852            | 56.25            |
| 5          | 94086             | OSC-1G       | 7 7/8                | 556            | 29.50            |
| 6          | 94468             | XIG          | 7 7/8                | 55             | 8.25             |
| 7          | 0568              | Core diamond | 6 3/16               | 60             | 10.75            |
| 8          | 907180            | MING         | 7 7/8                | 159            | 12.50            |
| 9          | 0568              | Core diamond | 6 3/16               | 25             | 5.25             |
| 10         | 94502             | OLV          | 7 7/8                | 79             | 14.50            |
| 11         | 907518            | MING         | 7 7/8                | 109            | 23.00            |
| 12         | 76050             | OLV          | 7 7/8                | 75             | 18.25            |
| 13         | 0568              | Core diamond | 6 3/16               | 55             | 7.25             |
| 14         | 907180            | MING         | 7 7/8                | 54             | 17.50            |
| 15         | 0568              | Core diamond | 6 3/16               | 40             | 12.50            |
| 16         | 908651            | MALG         | 7 7/8                | 47             | 7.50             |
| 17         | XD540             | WD7J         | 7 7/8                | 15             | 4.75             |

(d) Mud Record

| <u>Type</u>                | <u>Interval<br/>(ft.-K.B.)</u> | <u>Average Weight<br/>(lb/gal.)</u> | <u>Average W. L.<br/>(cc/30 min.)</u> |
|----------------------------|--------------------------------|-------------------------------------|---------------------------------------|
| Lime Bentonite<br>Spud Mud | 0- 826                         | 9.5                                 | -                                     |
| Water                      | 826-1,870                      | 8.5                                 | -                                     |
| Gel                        | 1,870-3,949                    | 9.2                                 | -                                     |
| Gypsum                     | 3,949-4,969                    | 9.7                                 | 15                                    |

(c) Deviation Record

| <u>Depth (ft. - K.B.)</u> | <u>Deviation (Degrees)</u> |
|---------------------------|----------------------------|
| 100                       | 1/2                        |
| 151                       | 1/2                        |
| 243                       | 1/2                        |
| 333                       | 1/8                        |
| 450                       | 3/4                        |
| 503                       | 1/2                        |
| 740                       | 1/2                        |
| 826                       | 1/2                        |
| 1,284                     | 1/2                        |
| 1,680                     | 1/2                        |
| 2,050                     | 3/4                        |
| 2,376                     | 1/2                        |
| 2,770                     | 1 1/4                      |
| 2,845                     | 1                          |
| 3,300                     | 1/2                        |
| 3,560                     | 1/2                        |
| 3,773                     | 3/4                        |
| 4,030                     | 1 1/2                      |
| 4,150                     | 1 1/2                      |
| 4,270                     | 2                          |
| 4,408                     | 2                          |
| 4,590                     | 2 3/8                      |
| 4,810                     | 2                          |

(f) Abandonment Plug - None

(g) Lost Circulation Zones

| <u>Zone Depth (ft.-K.B.)</u> | <u>Mud Loss (BBL.)</u> | <u>Corrective Measures taken</u>               |
|------------------------------|------------------------|------------------------------------------------|
| 1,875 - 2,249                | not recorded           | added 612 sacks<br>sawdust, 56 sacks<br>Lintex |

(h) Blowouts - None

SECTION IV - Logs (log copies previously forwarded)

| <u>Company</u>         | <u>Date</u> | <u>Type</u>                      | <u>Interval</u><br><u>(ft.-N.B.)</u> |
|------------------------|-------------|----------------------------------|--------------------------------------|
| Schlumberger of Canada | 2-22-1968   | Induction Electrical Log         | 826-4,969 ✓                          |
| Schlumberger of Canada | 2-22-1968   | Sidewall Neutron Porosity Log    | 826-4,969 ✓                          |
| Schlumberger of Canada | 2-22-1968   | Borehole Compensated Sonic       | 826-4,968 ✓                          |
| Schlumberger of Canada | 2-22-1968   | Compensate Formation Density Log | 4,250-4,969 ✓                        |
| McCullough Tool Co.    | 3-13-1968   | Gamma Ray Neutron Log            | 4,250-4,968                          |

SECTION V - Analysis

(a) Core Analysis and Core-Gamma Correlation

|          |              |
|----------|--------------|
| Core # 1 | 4445 to 4505 |
| Core # 2 | 4602 to 4627 |
| Core # 3 | 4875 to 4908 |
| Core # 4 | 4909 to 4949 |



POOR COPY

*NAWIK*

CORE LABORATORIES - CANADA LTD.

Petroleum Reservoir Engineering

MUSCH'S BAY OIL AND

COMPANY GAS COMPANY LIMITED

FIELD CAMERON HILLS

FILE CNP-1-9105

WELL HB CAMERON HILLS A-05

DATE FEBRUARY 20/68

LOCATION 60 04'02.15" N.L.

PROV. NORTHWEST TERRITORIES

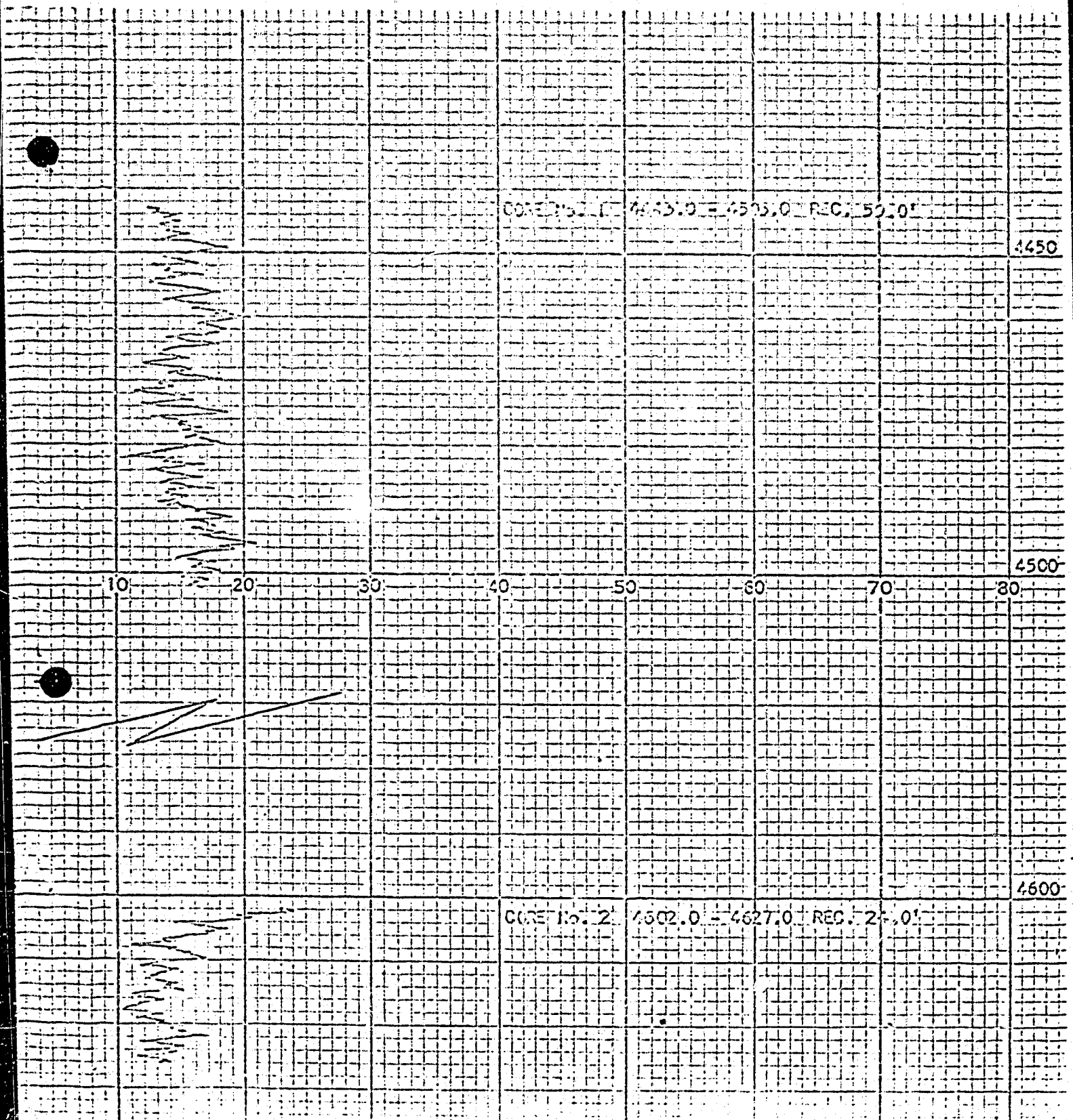
ELEV.

117 30'27.44" W.L.

# CORE-GAMMA CORRELATION

This correlation chart is prepared on the basis of data obtained from a gamma-ray log and a core log. The data are plotted on a grid with the gamma-ray log on the left and the core log on the right. The correlation is made by drawing a line through the data points. The line is then used to read the gamma-ray log values for any given core log value. The correlation is made by drawing a line through the data points. The line is then used to read the gamma-ray log values for any given core log value.

TO 11 SECS. VERTICAL SCALE: 5" = 100' SECS 2500 CPM



**CORE**

HUDSON'S BAY OIL AND

FIELD CAMERON HILLS

FILE CNP-1-2105

WELL 185 CAMERON HILLS A-05

DATE FEBRUARY 28/66

LOCATION: 60 01'02.15" N.L.  
117 30'27.44" W.L.

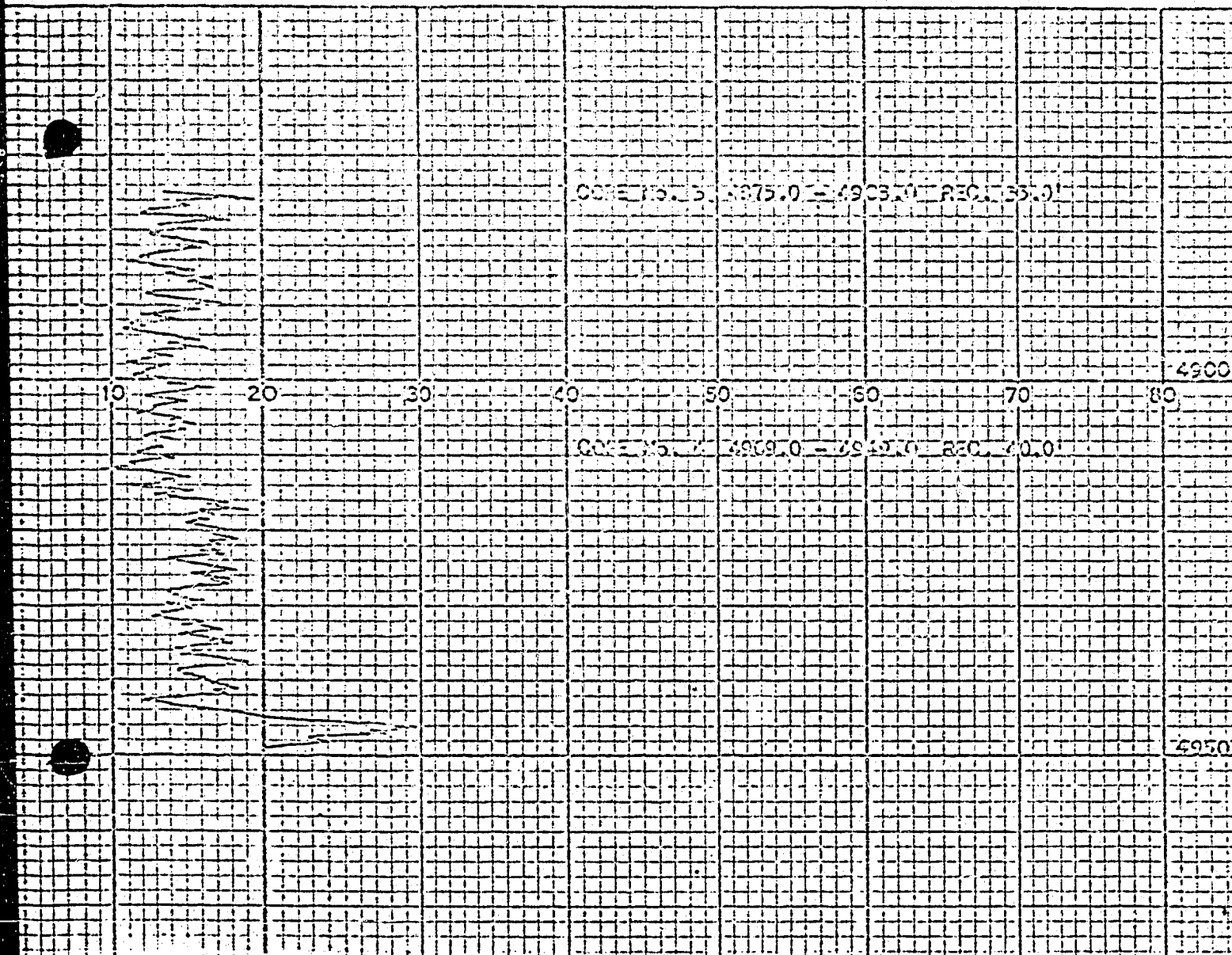
PROV. NORTHWEST TERRITORIES

ALBY

## CORE-GAMMA CORRELATION

The following responses to respondents are brief in character and identify the FBI as the agency to which, and for whom assistance and information should be sent. The responses are brief and concise and are not intended to be used as a model for the Bureau's response to the respondents. The responses are brief and concise and are not intended to be used as a model for the Bureau's response to the respondents. The responses are brief and concise and are not intended to be used as a model for the Bureau's response to the respondents.

TC 11 SEC5 VERTICAL SCALE: 5" = 100' SENS: 2500 CFM



COLUMN 41 - BASIC ROCK TYPE:

COLUMN 42 - MINERAL MODIFIER FOR BASIC ROCK TYPE:

|                                        | <u>CODE</u> |
|----------------------------------------|-------------|
| PLASTER OR OTHER MATERIAL              | 1           |
| FRACK OR UNCONSOLIDATED                | 2           |
| NUMBER OF DRILLED INTERVAL             | 3           |
| NOT ANALYZED BUT NOT NECESSARILY DENSE | 4           |
| NOT ANALYZED                           | 5           |
| COARSE                                 | 6           |

|                                                                                           | <u>CODE</u> |
|-------------------------------------------------------------------------------------------|-------------|
| FULL DIAMETER                                                                             | 1           |
| FULL DIAMETER - LESS THAN 2.1" DIAMETER                                                   | 2           |
| SMALL PLUGS - CONTAINS OR MIXED CONCENTRATIONS                                            | 3           |
| CORES - ALL TYPES, NOT DRILLED                                                            | 4           |
| HORIZONTAL TEST PLUGS                                                                     | 5           |
| VERTICAL TEST PLUGS                                                                       | 6           |
| UNCONSOLIDATED TECHNIQUE                                                                  | 7           |
| INTERSECTED PLUGS - FULL DIAMETER PORE CORES, TEST PLUGS, ETC.                            | 8           |
| KN MEASUREMENTS ON SMALL HORIZONTAL PLUGS - ALL OTHER MEASUREMENTS ON FULL DIAMETER PLUGS | 9           |
| GRADED SURFACE REMOVED - ALL MEASUREMENTS ON FULL DIAMETER PLUGS                          | 0           |

COLUMN 43 - BASIC ROCK TYPE:

COLUMN 44 - MINERAL MODIFIER FOR BASIC ROCK TYPE:

COLUMN 45 - TEXTURE MODIFIER FOR BASIC ROCK TYPE:

|           | <u>CODE</u> |
|-----------|-------------|
| SHALE     | 1           |
| SANDSTONE | 2           |
| SILTSTONE | 3           |
| DOLOMITE  | 4           |
| LIMESTONE | 5           |
| ARMYONITE | 6           |
| GYPSEM    | 7           |
| LOOSELY   | 8           |
| IRONSTONE | 9           |

|               | <u>CODE</u> |
|---------------|-------------|
| SHALE         | 1           |
| SANDY         | 2           |
| SILTY         | 3           |
| DOLOMITIC     | 4           |
| LIMY          | 5           |
| ARMYONITIC    | 6           |
| BENTONITIC    | 7           |
| APPROXIMATELY | 8           |

|                    | <u>CODE</u> |
|--------------------|-------------|
| CHALKY             | 1           |
| FOSSILIFEROUS      | 2           |
| COLLITIC           | 3           |
| EARTHY             | 4           |
| SUGARY             | 5           |
| CRYPTO-CRYSTALLINE | 6           |
| DENSE              | 7           |

COLUMN 46, 47 AND 48 - ACCESSORY MINERAL:

COLUMN 49 - GRAIN SIZE:

COLUMN 50 - CEMENTING AND MATRICES:

COLUMN 46 IS TO BE USED WHEN ONLY ONE ACCESSORY MINERAL IS PRESENT. COLUMNS 47 AND 48 MAY BE USED AS INDICATED IN THE FOOTNOTE.

|                    | <u>CODE</u> |
|--------------------|-------------|
| PYRITE             | 1           |
| CHERT              | 2           |
| PYROBITUMEN        | 3           |
| BENTONITE          | 4           |
| SAND, SILT OR CLAY | 5           |
| IRONSTONE          | 6           |
| STYLOLITE          | 7           |
| CALCITE            | 8           |
| GLAUCONITE         | 9           |

|                                    | <u>CODE</u> |
|------------------------------------|-------------|
| FINE - LESS THAN 0.075 MM DIA.     | 1           |
| MEDIUM - 0.075 TO 0.30 MM DIA.     | 2           |
| COARSE - 0.30 MM TO 1.0 MM DIA.    | 3           |
| VERY COARSE - GREATER THAN 1.0 MM. | 4           |

|                       | <u>CODE</u> |
|-----------------------|-------------|
| UNCONSOLIDATED        | 1           |
| SOFT (EASILY CRUSHED) | 2           |
| MEDIUM                | 3           |
| HARD                  | 4           |
| COMPLETE INFILLING    | 5           |

COLUMN 51 - SHALE CONTENT:

COLUMN 52 - COLOR:

|                                                                      | <u>CODE</u> |
|----------------------------------------------------------------------|-------------|
| SHALE - LESS THAN 5% SAND OR CARBONATE                               | 1           |
| CARBONATE OR SAND LENSES - APPROXIMATELY 5% TO 45% SAND OR CARBONATE | 2           |
| INTERSECTED - APPROXIMATELY 50% SAND OR CARBONATE                    | 3           |
| SHALE LENSES - APPROXIMATELY 55% TO 95% SAND OR CARBONATE            | 4           |
| SHALY PARTINGS OR BEDDING - OVER 95% SAND OR CARBONATE               | 5           |
| MASSIVE SAND OR CARBONATE - NO VISIBLE SHALE                         | 6           |

|                 | <u>CODE</u> |
|-----------------|-------------|
| GREY            | 1           |
| WHITE           | 2           |
| BROWN           | 3           |
| BLACK           | 4           |
| SALT AND PEPPER | 5           |
| GREEN           | 6           |

| CODE                         |   | CODE                                   |   | CODE                                   |   |
|------------------------------|---|----------------------------------------|---|----------------------------------------|---|
| NO STAINING                  | 1 | NO VISIBLE VUGS                        | 6 | NO RESIDUAL POROSITY                   | 1 |
| SPOTTY STAINING              | 2 | MICROSCOPIC TO PINPOINT VUGS           | 1 | MICROSCOPIC TO PINPOINT PORES          | 2 |
| POINT STAINING               | 3 | PINPOINT TO SMALL VUGS                 | 2 | PINPOINT TO SMALL PORES                | 3 |
| MEDIUM STAINING              | 4 | SMALL TO MEDIUM (1/32" to 1/8") VUGS   | 3 | SMALL TO LARGE PORES                   | 4 |
| DARK STAINING                | 5 | MEDIUM TO LARGE (1/8" to 1/4") VUGS    | 4 | MIXED SIZE PORES                       | 5 |
| HEAVY STAINING               | 6 | MIXED SIZE VUGS - MICROSCOPIC TO SMALL | 5 | WOOD WITH SOME INTERFIBRILLAR POROSITY | 6 |
| STAINED - DEGREE UNSPECIFIED | 7 | MIXED SIZE VUGS - PINPOINT TO MEDIUM   | 6 | WIDELY INTERFIBRILLAR POROSITY - FIBRE | 7 |
|                              |   | MIXED SIZE VUGS - SMALL TO LARGE       | 7 | SIZE UNSPECIFIED                       |   |
|                              |   | MIXED SIZE VUGS - PINPOINT TO LARGE    | 8 |                                        |   |
|                              |   | SCATTERED VUGS - ALL SIZES             | 9 |                                        |   |

COLUMN 72 - FRACTURES:

| CODE                               |   |
|------------------------------------|---|
| PREDOMINANTLY HORIZONTAL FRACTURES | 1 |
| PREDOMINANTLY VERTICAL FRACTURES   | 2 |
| MIXED ORIENTATION FRACTURES        | 3 |

COLUMN 73 - STAINING FLUID, CORING DATE TO ANALYSIS

| CODE                                                                  |   |
|-----------------------------------------------------------------------|---|
| CORE EXPOSED TO AIR                                                   | 1 |
| CORE SEALED IN CANS IN CONTACT WITH DRILLING FLUID                    | 2 |
| CORE SEALED IN CANS IN CONTACT WITH CRUDE OIL                         | 3 |
| CORE SEALED IN CANS IN CONTACT WITH SPECIAL OIL OR PRESERVATION FLUID | 4 |

COLUMN 74 - INTERPRETIVE VALUE POROSITY:

| CODE                                                                         |   |
|------------------------------------------------------------------------------|---|
| NO MEASUREMENTS WERE TAKEN ON THIS PLUG BUT ASSUMED THE SAME AS ANOTHER PLUG | 1 |
| INTERPRETATIVE VALUE - FROM LOGS FOR POROSITY                                | 2 |
| INTERPRETATIVE VALUE - BY AVERAGING SIMILAR PLUGS                            | 3 |
| FIELD AVERAGE VALUE                                                          | 4 |

COLUMN 75 - INTERPRETATIVE VALUE - PERMEABILITY:

| CODE                                                                                             |   |
|--------------------------------------------------------------------------------------------------|---|
| NO MEASUREMENTS TAKEN ON THIS PLUG BUT ASSUMED AS BEING THE SAME AS ANOTHER PLUG                 | 1 |
| INTERPRETATED VALUE FOR PERMEABILITY - VALUE OBTAINED BY AVERAGING SIMILAR PLUGS                 | 2 |
| FIELD AVERAGE VALUE                                                                              | 3 |
| PLUG ANALYZED BUT VALUE OF K <sub>MAX</sub> LESS THAN VALUE SHOWN                                | 4 |
| PLUG ANALYZED BUT VALUE BETWEEN 0.001 and 0.01 MD AND VALUE SHOWN HAS BEEN ROUNDED 0 VALUE SHOWN | 5 |
| PLUG ANALYZED BUT VALUE GREATER THAN VALUE SHOWN                                                 | 6 |
| FRACTURED, K <sub>90</sub> USED FOR K <sub>MAX</sub>                                             | 7 |

COLUMN 76 - INTERPRETATIVE VALUES - OTHERS (INTERVAL, SATURATIONS, DENSITY):

| CODE                                                                                                 |   |
|------------------------------------------------------------------------------------------------------|---|
| INTERPRETATED VALUE FOR INTERVAL (H <sub>2</sub> O)                                                  | 1 |
| INTERPRETATED VALUE FOR OIL SATURATION                                                               | 2 |
| INTERPRETATED VALUE FOR WATER SATURATION                                                             | 3 |
| INTERPRETATED VALUE FOR OIL AND WATER SATURATION                                                     | 4 |
| INTERPRETATED VALUE FOR OIL, WATER AND INTERVAL                                                      | 5 |
| INTERPRETATED VALUE FOR VALUES OTHER THAN POROSITY, PERMEABILITY, INTERVAL, OIL AND WATER SATURATION | 6 |

Each card column contains information unique to that column, with one exception. Columns 62, 63 and 64 describe accessory minerals present in the sample. The common accessory minerals are numbered 2 through 9. Up to 19 accessory minerals are possible within this system. In any one sample, one, two or three minerals in the range below 10 may be identified, or one mineral below 10 and one above 10 may be shown. If column 3 contains a one it will be assumed that this one belongs with column 64 to indicate a mineral in the range above 10.

CORE LABORATORIES-CANADA LTD.  
EDMONTON ALBERTA

Page - 1 of 5  
File - CNP-1-2106

Company HUDSON'S BAY OIL AND GAS COMPANY LIMITED  
Date Report MARCH 8, 1968  
Field, Prov. CAMERON HILLS, NORTHWEST TERRITORIES  
Location 60 04'02.15" N.L. 117 30'27.44" W.L.  
Formation SLAVE POINT  
Cores DIAMOND CORES  
Type of Anal. FULL DIAMETER  
Analysts WD RB KS OK  
Remarks GLAZED SURFACE ON ALL SAMPLES REMOVED  
PRIOR TO PERMEABILITY MEASUREMENTS.

Well Code (1-4) -- --  
Catalogue No. (5) --  
Depths (6-10) -- --  
Well Name (11-46) HB CAMERON HILLS A-05  
Survey System (47) --  
Location Except (48-49) --  
Location (50-61) -- --

Well Except (62) --  
File No. (63) --  
KB Elevation (64-68) -- --  
Deviated Hole DC (69-73) -- --  
Correlation DC (74-77) -- --  
Lab Code (78-79) --  
Mud Code (80) --

Note: Do not punch decimals or special characters.  
Bracketed figures refer to column numbers.

| Plug No. | Interval Represented |         | Permeability (md) |         | Porosity %   | Density |         | Residual Saturations (gPV) |         | Plug Description | Fertal Cores (77-) |
|----------|----------------------|---------|-------------------|---------|--------------|---------|---------|----------------------------|---------|------------------|--------------------|
|          | Top                  | Base    | Thick             | Maximum | 90° Vertical | Bulk    | Grain   | Oil                        | Water   |                  |                    |
|          | (5-10)               | (11-16) | (17-19)           | (20-26) | (27-33)      | (34-40) | (41-43) | (44-46)                    | (47-49) | (50-52)          | (53-55)            |

CURED INTERVAL 4443.0' - 4503.0'

LOG NO. 1 4443.0' - 4503.0' (Rec. 59:01) (13 Boxes)

|   |        |        |      |      |       |       |     |      |      |   |   |
|---|--------|--------|------|------|-------|-------|-----|------|------|---|---|
| 1 | 4443.0 | 4447.5 | 4.5  | -    | -     | -     | -   | -    | -    | - | - |
| 1 | 4447.5 | 4448.8 | 1.3  | 0.03 | <0.01 | <0.01 | 0.4 | 2.68 | 2.69 | - | - |
| 2 | 4448.8 | 4451.2 | 2.4  | -    | -     | -     | -   | -    | -    | - | - |
| 2 | 4451.2 | 4452.4 | 1.2  | 2.09 | 0.01  | <0.01 | 0.2 | 2.69 | 2.70 | - | - |
| - | 4452.4 | 4502.0 | 49.6 | -    | -     | -     | -   | -    | -    | - | - |
| - | 4502.0 | 4503.0 | 1.0  | -    | -     | -     | -   | -    | -    | - | - |

COFF LABORATORIES-CANADA LTD.  
EDMONTON ALBERTA

Page - 2 of 5  
File - CWP-1-2106

Company HUDSON'S BAY OIL AND GAS COMPANY LIMITED  
Date Report MARCH 8, 1968  
Field, Prov. CAMERON HILLS, NORTHWEST TERRITORIES  
Location 60 04'02.15" N.L. 117 30'27.44" W.L.  
Formation BISTCHO  
Cores DIAMOND CORES  
Type of Anal. FULL DIAMETER  
Analysts WD RB KS GK  
Remarks GLAZED SURFACE ON ALL SAMPLES REMOVED  
PRIOR TO PERMEABILITY MEASUREMENTS.

Well Code (1 - 4) - - -  
Catalogue No. (5) - - -  
Depths (6 - 10) - - -  
Well Name (11-46) HB CAMERON HILLS A-05  
Survey System (47) - - -  
Location Except (48-49) - - -  
Location (50-61) - - -

Well Except (62) - - -  
File No. (63) - - -  
KB Elevation (64-68) - - -  
Caviated Hole DC (69-73) - - -  
Correlation DC (74-77) - - -  
Lab Code (78-79) - - -  
Fwd Code (80) - - -

Note: Do not punch decimals or special characters  
Bracketed figures refer to column numbers.

| Plug | Interval Represented |         |         | Permeability (md) |              | Porosity % | Density |         | Residual Saturations (gpy) |         | Plug Description | Formation Code |         |
|------|----------------------|---------|---------|-------------------|--------------|------------|---------|---------|----------------------------|---------|------------------|----------------|---------|
|      | Top                  | Base    | Thick   | Maximum           | 90° Vertical |            | Bulk    | Grain   | Oil                        | Water   |                  |                |         |
| 20   | (5-16)               | (11-16) | (17-19) | (20-26)           | (27-33)      | (34-40)    | (41-43) | (44-46) | (47-49)                    | (50-52) | (53-55)          | (56-76)        | (27-33) |

COARED INTERVAL 4602.0' - 4627.0'

CORE NO. 2 4602.0' - 4627.0' (Rec. 24.0') (6 Boxes)

|    |        |        |      |       |       |       |       |   |   |   |
|----|--------|--------|------|-------|-------|-------|-------|---|---|---|
| 3  | 4602.0 | 4603.2 | 1.2  | -     | -     | -     | -     | - | - | - |
| 4  | 4603.2 | 4604.1 | 0.9  | 0.10  | 0.06  | <0.01 | <0.01 | - | - | - |
| 5  | 4604.1 | 4605.3 | 1.2  | 0.12  | 0.05  | <0.01 | <0.01 | - | - | - |
| 6  | 4605.3 | 4605.9 | 0.6  | <0.01 | <0.01 | <0.01 | <0.01 | - | - | - |
| 7  | 4605.9 | 4606.5 | 0.6  | <0.01 | <0.01 | <0.01 | <0.01 | - | - | - |
| 8  | 4606.5 | 4610.5 | 4.0  | -     | -     | -     | -     | - | - | - |
| 9  | 4610.5 | 4611.0 | 0.5  | *     | <0.01 | *     | <0.01 | - | - | - |
| 10 | 4611.0 | 4612.2 | 1.2  | 0.66  | 0.62  | <0.01 | <0.01 | - | - | - |
| 11 | 4612.2 | 4612.9 | 0.7  | 1.85  | 1.73  | <0.01 | <0.01 | - | - | - |
| 12 | 4612.9 | 4613.3 | 0.4  | 0.41  | 0.24  | <0.01 | <0.01 | - | - | - |
| 13 | 4613.3 | 4614.0 | 0.7  | 2.34  | 0.88  | <0.01 | <0.01 | - | - | - |
| 14 | 4614.0 | 4625.0 | 12.0 | -     | -     | -     | -     | - | - | - |
| 15 | 4625.0 | 4627.0 | 1.0  | -     | -     | -     | -     | - | - | - |

CORE LABORATORIES-CANADA LTD.  
 EDMONTON ALBERTA

Page - 3 of 5  
 File - CND-1-9106

Company HUDSON'S BAY OIL AND GAS COMPANY LIMITED  
 Date Report MARCH 8, 1968  
 Field, Prov. CAMERON HILLS, NORTHWEST TERRITORIES  
 Location 60 04'02.15" N.L. 117 30'27.44" W.L.  
 Formation KEG RIVER  
 Cores DIAMOND CORES  
 Type of Anal. FULL DIAMETER  
 Analysts WD RB KS OK  
 Remarks GLAZED SURFACE ON ALL SAMPLES REMOVED  
 PRIOR TO PERMEABILITY MEASUREMENTS.

Well Code (1-4) ---  
 Catalogue No. (5) ---  
 Depths (6-10) ---  
 Well Name (11-46) HB CAMERON HILLS A-05  
 Survey System (47) ---  
 Location Except (48-49) ---  
 Location (50-61) ---

Well Except (62) ---  
 File No. (63) ---  
 KB Elevation (64-68) ---  
 Deviated Hole DC (69-73) ---  
 Correlation DC (74-77) ---  
 Lab Code (78-79) ---  
 Mud Code (80) ---

Note: Do not punch decimals or special characters.  
 Bracketed figures refer to column numbers.

| Plug | Interval Represented |         | Permeability (md) |              | Porosity % | Density |         | Residual Saturations (SPV) |         | Plug Description | Formation Code |
|------|----------------------|---------|-------------------|--------------|------------|---------|---------|----------------------------|---------|------------------|----------------|
|      | Top                  | Base    | Thick             | 90° Vertical |            | Bulk    | Grain   | Oil                        | Water   |                  |                |
|      | (5-10)               | (11-16) | (17-19)           | (20-26)      | (27-33)    | (34-40) | (41-43) | (44-46)                    | (47-49) | (50-52)          | (53-55)        |

CORDED INTERVAL 4875.0' - 4949.0'

CORE NO. 3 4875.0' - 4908.0' (Rec. 33.0') (7 Boxes)

|    |        |        |     |       |       |       |     |      |      |   |   |   |     |   |     |   |   |     |     |     |     |   |
|----|--------|--------|-----|-------|-------|-------|-----|------|------|---|---|---|-----|---|-----|---|---|-----|-----|-----|-----|---|
| 12 | 4875.0 | 4876.6 | 1.6 | 4.51  | <0.01 | 10.83 | 1.2 | 2.81 | 2.85 | - | - | - | 0.4 | - | 6.8 | - | - | 3.6 | 1.7 | 2.6 | 3.1 | - |
| 13 | 4876.6 | 4878.0 | 1.4 | -     | -     | -     | -   | -    | -    | - | - | - | 5   | 6 | -   | - | - | -   | -   | -   | -   | - |
| 14 | 4878.0 | 4878.7 | 0.7 | 17.51 | <0.01 | 14.81 | 1.5 | 2.81 | 2.86 | - | - | - | 0.4 | - | 6   | - | - | 3.6 | 1.7 | 2.6 | 2.1 | - |
| 15 | 4878.7 | 4879.6 | 0.9 | **    | 35.00 | 0.09  | 1.2 | 2.80 | 2.84 | - | - | - | 0.4 | - | 6   | - | - | 3.6 | 1.7 | 2.6 | 3.1 | - |
| 16 | 4879.6 | 4880.7 | 1.1 | 0.47  | 0.25  | 0.41  | 1.0 | 2.81 | 2.83 | - | - | - | 0.4 | - | 6.8 | - | - | 3.6 | 1.7 | 2.6 | 2.1 | - |
| 17 | 4880.7 | 4882.6 | 1.9 | 0.28  | 0.27  | <0.01 | 1.0 | 2.82 | 2.84 | - | - | - | 0.4 | - | 6.8 | - | - | 3.6 | 1.7 | 2.6 | 2.1 | - |
| 18 | 4882.6 | 4884.6 | 2.0 | -     | -     | -     | -   | -    | -    | - | - | - | 5   | 6 | -   | - | - | -   | -   | -   | -   | - |
| 19 | 4884.6 | 4885.6 | 1.0 | 1.36  | 0.16  | <0.01 | 2.5 | 2.78 | 2.85 | - | - | - | 0.4 | - | 6.8 | - | - | 3.6 | 1.7 | 2.6 | 1.1 | - |
| 20 | 4885.6 | 4886.4 | 0.8 | 1.44  | 0.92  | 0.51  | 1.2 | 2.81 | 2.85 | - | - | - | 0.4 | - | 6.8 | - | - | 3.6 | 1.7 | 2.6 | 1.1 | - |
| 21 | 4886.4 | 4886.7 | 0.3 | -     | -     | -     | -   | -    | -    | - | - | - | 5   | 6 | 1   | - | - | -   | -   | -   | -   | - |
| 22 | 4886.7 | 4889.2 | 2.5 | *     | 0.97  | *     | -   | -    | -    | - | - | - | 0.4 | - | 6.8 | - | - | 3.6 | 1.7 | 2.6 | 2.1 | - |
| 23 | 4889.2 | 4890.0 | 0.8 | 0.07  | <0.01 | <0.01 | 2.5 | 2.80 | 2.87 | - | - | - | 0.4 | - | 6.8 | - | - | 3.6 | 1.7 | 2.6 | 1.1 | - |
| 24 | 4890.0 | 4891.6 | 1.6 | 0.22  | 0.20  | 0.45  | 1.6 | 2.79 | 2.84 | - | - | - | 0.4 | - | 6.8 | - | - | 3.6 | 1.7 | 2.6 | 1.1 | - |
| 25 | 4891.6 | 4892.5 | 1.3 | 93.45 | 38.30 | 0.39  | 2.5 | 2.78 | 2.85 | - | - | - | 0.4 | - | 6.8 | - | - | 3.6 | 1.7 | 2.6 | 2.1 | - |
| 26 | 4892.5 | 4893.9 | 1.0 | 1.82  | 0.05  | <0.01 | 1.6 | 2.81 | 2.86 | - | - | - | 0.4 | - | 6.8 | - | - | 3.6 | 1.7 | 2.6 | 2.1 | - |
| 27 | 4893.9 | 4895.9 | 2.0 | -     | -     | -     | -   | -    | -    | - | - | - | 5   | 6 | -   | - | - | -   | -   | -   | -   | - |
| 28 | 4895.9 | 4897.2 | 1.3 | 8.84  | 0.48  | 0.62  | 1.5 | 2.82 | 2.86 | - | - | - | 0.4 | - | 6.8 | - | - | 3.6 | 1.7 | 2.6 | 2.1 | - |
| 29 | 4897.2 | 4898.6 | 1.4 | -     | -     | -     | -   | -    | -    | - | - | - | 5   | 6 | -   | - | - | -   | -   | -   | -   | - |

HUDSON'S BAY OIL AND GAS COMPANY LIMITED  
HB CAVERON HILLS A-05

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| Plug No. | Interval Represented |              | Permeability (md) |                      | Porosity % | Density      |               | Residual Saturations (SPV) |               | Plug Description | Format |
|----------|----------------------|--------------|-------------------|----------------------|------------|--------------|---------------|----------------------------|---------------|------------------|--------|
|          | Top (5-0)            | Base (11-16) | Maximum (20-26)   | 90° Vertical (34-40) |            | Bulk (44-46) | Grain (47-49) | Oil (50-52)                | Water (53-55) |                  |        |

CORE NO. 3 (Cont'd.)

|    |        |        |     |        |       |       |     |      |      |   |   |
|----|--------|--------|-----|--------|-------|-------|-----|------|------|---|---|
| 25 | 4398.6 | 4899.8 | 1.2 | 29.73  | 0.06  | 2.50  | 2.1 | 2.80 | 2.86 | - | - |
| 26 | 4899.8 | 4901.1 | 1.3 | 3.16   | 0.11  | 1.64  | 2.2 | 2.79 | 2.85 | - | - |
| 27 | 4901.1 | 4902.2 | 1.1 | 23.86  | 1.05  | <0.01 | 3.4 | 2.75 | 2.85 | - | - |
| 28 | 4902.2 | 4903.0 | 0.8 | 0.59   | 0.39  | 0.02  | 3.1 | 2.77 | 2.86 | - | - |
| 29 | 4903.0 | 4903.9 | 0.9 | 0.09   | <0.01 | <0.01 | 1.1 | 2.83 | 2.86 | - | - |
| 30 | 4903.9 | 4904.8 | 0.9 | 19.44  | 8.57  | 0.33  | 4.4 | 2.72 | 2.84 | - | - |
| 31 | 4904.8 | 4905.4 | 0.6 | 3.88   | 1.14  | 1.44  | 2.0 | 2.80 | 2.86 | - | - |
| 32 | 4905.4 | 4906.0 | 0.6 | 291.70 | 17.14 | 24.19 | 4.7 | 2.72 | 2.85 | - | - |
| 33 | 4906.0 | 4906.6 | 0.6 | 7.12   | 1.22  | 11.09 | 3.0 | 2.69 | 2.77 | - | - |
| 34 | 4906.6 | 4908.0 | 1.4 | 1.05   | 0.60  | 0.03  | 2.3 | 2.80 | 2.86 | - | - |
| .. | 4908.0 | 4909.0 | 1.0 | -      | -     | -     | -   | -    | -    | - | - |

CORE NO. 4 4909.0' - 4949.0' (Rec. 40.0') (9 Boxes)

|    |        |        |      |       |      |       |     |      |      |   |   |
|----|--------|--------|------|-------|------|-------|-----|------|------|---|---|
| 35 | 4909.0 | 4909.9 | 0.9  | 1.81  | 0.39 | <0.01 | 1.0 | 2.82 | 2.84 | - | - |
| 36 | 4909.9 | 4910.8 | 0.9  | 16.00 | 1.18 | <0.01 | 2.0 | 2.79 | 2.84 | - | - |
| 37 | 4910.8 | 4912.5 | 1.7  | *     | 0.36 | *     | 1.5 | 2.83 | 2.87 | - | - |
| 38 | 4912.5 | 4913.4 | 0.9  | 0.42  | 0.42 | 0.23  | 1.3 | 2.81 | 2.85 | - | - |
| 39 | 4913.4 | 4914.1 | 0.7  | 11.97 | 1.33 | 1.34  | 1.3 | 2.83 | 2.97 | - | - |
| 40 | 4914.1 | 4914.8 | 0.7  | 2.36  | 0.66 | 1.06  | 1.6 | 2.81 | 2.85 | - | - |
| .. | 4914.8 | 4916.2 | 1.4  | -     | -    | -     | -   | -    | -    | - | - |
| 41 | 4916.2 | 4917.3 | 1.1  | 2.09  | 1.48 | 0.39  | 0.6 | 2.83 | 2.84 | - | - |
| .. | 4917.3 | 4930.0 | 12.7 | -     | -    | -     | -   | -    | -    | - | - |
| 42 | 4930.0 | 4931.0 | 1.0  | 2.39  | 0.10 | 0.42  | 0.4 | 2.77 | 2.78 | - | - |
| .. | 4931.0 | 4938.8 | 7.8  | -     | -    | -     | -   | -    | -    | - | - |
| 43 | 4938.8 | 4940.0 | 1.2  | 0.35  | 0.30 | <0.01 | 0.4 | 2.85 | 2.86 | - | - |
| .. | 4940.0 | 4944.7 | 4.7  | -     | -    | -     | -   | -    | -    | - | - |
| 44 | 4944.7 | 4945.9 | 1.2  | *     | 0.53 | 3.90  | 1.2 | 2.67 | 2.70 | - | - |



HUDSON'S BAY OIL AND GAS COMPANY LIMITED  
HB CAMERON HILLS A-05

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| Plug No. | Interval Represented |         | Permeability (md) |              | Porosity % | Density |         | Residual Saturations (X-ray) |         | Plug Description | Forecast Code |         |         |
|----------|----------------------|---------|-------------------|--------------|------------|---------|---------|------------------------------|---------|------------------|---------------|---------|---------|
|          | Top                  | Base    | Maximum           | 90° Vertical |            | Bulk    | Grain   | Oil                          | Water   |                  |               |         |         |
|          |                      |         |                   |              |            |         |         |                              |         |                  |               |         |         |
|          | (5-10)               | (11-16) | (17-19)           | (20-26)      | (27-33)    | (34-40) | (41-43) | (44-46)                      | (47-49) | (50-52)          | (53-55)       | (56-76) | (77-10) |

CORE NO. 4 (Cont'd.)

|        |        |     |      |      |       |     |      |      |   |   |   |   |   |
|--------|--------|-----|------|------|-------|-----|------|------|---|---|---|---|---|
| 4945.9 | 4947.5 | 1.6 | 1.14 | 1.13 | <0.01 | 1.4 | 2.71 | 2.75 | - | - | - | - | - |
| 4947.5 | 4949.0 | 1.5 | -    | -    | -     | -   | -    | -    | - | - | - | - | - |

\* - Broken or fractured core  
\*\* - Permeability greater than 30,000 md.

(b) Water Analysis - None

See Absolute Open Flow Test

(c) Gas Analysis

DST # 2 Lab. No. 68-6070

DST # 3 Lab. No. 68-6085

DST # 5 Lab. No. 68-6086

See Absolute Open Flow Test

(d) Oil Analysis - None

See Absolute Open Flow Test

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## GAS ANALYSIS REPORT

Lab. No. 168-6070

Received: Feb. 20, 1968 Reported: Feb. 21, 1968

Well: Hudson's Bay Canyon Wells A-01 Operator: Hudson's Bay Oil and Gas Company Limited

Field or Area: Canyon Wells Location: 64° 06' 02.15" Lat. Elev.: KB 2556' Grid 2543'  
117° 30' 27.44" Long.

Zone and Formations: Wistahia Sample Interval: 4572' - 4582'

Well production at sampling time: Oil \_\_\_\_\_ bpd; Gas \_\_\_\_\_ MMCFD; Water \_\_\_\_\_ bpd.

Sampled from: line Sampled by: Cliff Jasman Date: Feb. 16, 1968

Pressure: (a) at point of sampling 432 psig (b) Gas Bomb pressure 40 psig

Temperature: (a) at point of sampling 78 °F (b) Separator \_\_\_\_\_ °F

Pressure: Reservoir \_\_\_\_\_ Tubing \_\_\_\_\_ Casing \_\_\_\_\_ Separator \_\_\_\_\_

OTHER PERTINENT DATA Method of Production: D.S.T. #2 Mud Type: gyp base

Recovery: 30% sulfurous water Height sample taken above tool: 30'

Cliff Jasman

(Signed) Hudson's Bay Oil & Gas Co.

| COMPOSITION      | % by Volume | G.P.M. in Imp. Gal. @ 60°F. & 14.65 PSIA | G.P.M. (Calculated)                                                   | SPECIFIC GRAVITY       |
|------------------|-------------|------------------------------------------|-----------------------------------------------------------------------|------------------------|
| Helium           | .03         |                                          | pentanes + .079                                                       | Calculated .540        |
| Hydrogen sulfide | .21         |                                          | at 12 lbs. .079                                                       | by Weight .642         |
| Carbon dioxide   | 5.37        |                                          | at 15 lbs. .084                                                       | CRITICALS (Calculated) |
| Oxygen           | .00         |                                          | at 22 lbs. .093                                                       | Pc 690.3               |
| Nitrogen         | 2.51        |                                          | at 26 lbs. .108                                                       | Tc 359.6               |
| Methane          | 89.26       |                                          | VAPOR PRESSURE (Calc.) of pentanes + 11.78                            |                        |
| Ethane           | 1.38        |                                          | H <sub>2</sub> S Grains per 100 cu. ft. @ 60°F. & 14.65 p.s.i.a. 132  |                        |
| Propane          | .67         | .153                                     | GROSS B.T.U. (Calc.) @ 60°F. & 14.65 p.s.i.a. 965.7                   |                        |
| Isobutane        | .15         | .041                                     | DEW POINT (Calc.) p.s.i. 950 1050 1200                                |                        |
| N-butane         | .23         | .060                                     | FAH 1 -2 -7                                                           |                        |
| Isopentane       | .07         | .021                                     | REMARKS When received for analysis the pressure was 95 psig. at 74°F. |                        |
| N-pentane        | .07         | .021                                     |                                                                       |                        |
| Hexanes          | .06         | .020                                     |                                                                       |                        |
| Heptanes +       | .04         | .017                                     |                                                                       |                        |
| TOTAL            | 100.00      | .333                                     |                                                                       |                        |

**CHEMICAL & GEOLOGICAL LABORATORIES LTD. GEOLOGICAL FILES**

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**GAS ANALYSIS REPORT:** Lab. No. 502-605 Received Feb. 23, 1968 Reported Feb. 27, 1968

Well: H.B. Cameron Hills A-05 Operator: Hudson's Bay Oil and Gas Company Limited

Field or Area: \_\_\_\_\_ Location: 64° 04' 02.15" Lat. Elev: 2550' Grd. 2543'  
117° 50' 27.64" Long.

Zone and Formation: Kan River Sample Interval: 4845' - 4875'

Well production at sampling time: Oil \_\_\_\_\_ bpd; Gas \_\_\_\_\_ MCFD; Water \_\_\_\_\_ bpd.

Sampled from: Surface Sampled by: T.G. Eastland Testers Ltd. Date: Feb. 18, 1968

Pressure: (a) at point of sampling \_\_\_\_\_ psig (b) Gas Bomb pressure \_\_\_\_\_ psig

Temperature: (c) at point of sampling \_\_\_\_\_ °F (b) Separator \_\_\_\_\_ °F

Pressures: Reservoir \_\_\_\_\_ Tubing \_\_\_\_\_ Casing \_\_\_\_\_ Separator \_\_\_\_\_

OTHER PERTINENT DATA: D.S.T. #3 GTS in 4 minutes at 1 MCFD (Side static freezing-off, may be higher). Recovery: 15% gas cut sulfurous mud.

(Signed)

| COMPOSITION      | % by Volume | G.P.M. in Imp. Gal. @ 60°F. & 14.65 psia | G.P.M. (Calculated)                                                    | SPECIFIC GRAVITY       |
|------------------|-------------|------------------------------------------|------------------------------------------------------------------------|------------------------|
| Helium           | .11         |                                          | pentanes + .152                                                        | Calculated .640        |
| Hydrogen sulfide | .00         |                                          | at 12 lbs. _____                                                       | by Weight .653         |
| Carbon dioxide   | 1.21        |                                          | at 15 lbs. .152                                                        | CRITICALS (Calculated) |
| Oxygen           | .00         |                                          | at 22 lbs. .176                                                        | Pc 665.3               |
| Nitrogen         | 5.42        |                                          | at 25 lbs. .102                                                        | Tc 350.9               |
| Methane          | 85.00       |                                          | VAPOR PRESSURE (Calc.) of pentanes + 14.00                             |                        |
| Ethane           | 3.78        |                                          | H <sub>2</sub> S Grains per 100 cu. ft. @ 60°F. & 14.65 p.s.i.a. 0     |                        |
| Propane          | 1.93        | .452                                     | GROSS D.T.U. (Calc.) @ 60°F. & 14.65 p.s.i.a. 1036.1                   |                        |
| Isobutane        | .35         | .095                                     | DEW POINT (Calc.) p.s.i. 950 1050 1200                                 |                        |
| N-butane         | .68         | .173                                     | FAH 18 14 9                                                            |                        |
| Isopentane       | .19         | .058                                     | REMARKS When received for analysis, the pressure was 61 psig. at 74°F. |                        |
| N-pentane        | .19         | .057                                     |                                                                        |                        |
| Hexanes          | .07         | .024                                     |                                                                        |                        |
| Heptanes +       | .03         | .013                                     |                                                                        |                        |
| TOTAL            | 100.00      | .877                                     |                                                                        |                        |

**CHEMICAL & GEOLOGICAL LABORATORIES LTD. GEOLOGICAL FILES**

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**GAS ANALYSIS REPORT** Lab. No. 68-6026 Received Feb. 23, 1968 Reported Feb. 23, 1968

Well: W.H.3, Cameron Hills A-05 Operator: Hudson's Bay Oil and Gas Company Limited

Field or Area: Cameron Hills Location: 64° 04' 02.15" Lat. 117° 30' 27.44" Long. Elev. 2555' Grd. 2543'

Zone and Formation: Red River Sample Interval: 4376' - 4509'

Well production at sampling time: Oil \_\_\_\_\_ bpd; Gas \_\_\_\_\_ MCFD; Water \_\_\_\_\_ bpd.

Sampled from: Flowline Sampled by: T.C. Eastland Testers Ltd. Date: Feb. 20, 1968

Pressure: (a) at point of sampling \_\_\_\_\_ 96 psig (b) Gas Comb pressure \_\_\_\_\_ 60 psig

Temperature: (a) at point of sampling \_\_\_\_\_ °F (b) Separator \_\_\_\_\_ °F

Pressure: Reservoir \_\_\_\_\_ Tubing \_\_\_\_\_ Casing \_\_\_\_\_ Separator \_\_\_\_\_

OTHER PERTINENT DATA D.S.T. 65. QTS at 500 MCFD.

Recovery: 110% sulfurous gas cut mud.

(Signed)

| COMPOSITION      | % by Volume | G.P.M. in Imp. Gal. @ 60°F. & 14.65 PSIA | G.P.M. (Calculated)                                                | SPECIFIC GRAVITY                                                              |
|------------------|-------------|------------------------------------------|--------------------------------------------------------------------|-------------------------------------------------------------------------------|
| Helium           | .10         |                                          | pentanes + .168                                                    | Calculated .604                                                               |
| Hydrogen sulfide | .00         |                                          | at 12 lbs. .170                                                    | by Weight .695                                                                |
| Carbon dioxide   | 2.17        |                                          | at 15 lbs. .181                                                    | CRITICALS (Calculated)                                                        |
| Oxygen           | .00         |                                          | at 22 lbs. .212                                                    | Pc 652.9                                                                      |
| Nitrogen         | 15.24       |                                          | at 26 lbs. .235                                                    | Tc 348.5                                                                      |
| Methane          | 75.85       |                                          | VAPOR PRESSURE (Calc.) of pentanes + 11.22                         |                                                                               |
| Ethane           | 3.43        |                                          | H <sub>2</sub> S Grains per 100 cu. ft. @ 60°F. & 14.65 p.s.i.a. 0 |                                                                               |
| Propane          | 1.66        | .379                                     | GROSS B.T.U. (Calc.) @ 60°F. & 14.65 p.s.i.a. 913.6                |                                                                               |
| Isobutane        | .26         | .071                                     | DEW POINT (Calc.) p.s.i.                                           | 950 1950 1200                                                                 |
| N-butane         | .49         | .128                                     | FAH 29 25 19                                                       |                                                                               |
| Isopentane       | .14         | .042                                     | REMARKS                                                            | Sample received in a 1000 cc. container under a pressure of 1½ psig. at 74°F. |
| N-pentane        | .14         | .042                                     |                                                                    |                                                                               |
| Hexanes          | .11         | .037                                     |                                                                    |                                                                               |
| Heptanes +       | .11         | .047                                     |                                                                    |                                                                               |
| TOTAL            | 100.00      | .746                                     |                                                                    |                                                                               |

SECTION VI - Completion Summary

(a) Tubing Record

|                                                                     | <u>Length</u> | <u>Depth<br/>(ft.-K.E.)</u> |
|---------------------------------------------------------------------|---------------|-----------------------------|
| 137 - joints 2 7/8 inch O.D., 6.5 lb.,<br>J-55 EUE tubing           | 4,254.08      | 4,244.65                    |
| 1 - 2 1/2 inch Otis "X" Landing<br>Nipple and Collar                | 0.85          | 4,245.48                    |
| 1 - joint 2 7/8 inch O.D. tubing                                    | 31.60         | 4,277.08                    |
| 1 - 2 3/8 inch x 2 7/8 inch EUE<br>reamed swage and collar          | 0.84          | 4,277.92                    |
| 1 - 2 3/8 inch x 5 1/2 inch<br>Brown Husky M-1 production<br>packer | 4.14          | 4,282.06                    |
| 1 - 2 3/8 inch x 6 ft. EUE pup<br>joint                             | 6.08          | 4,288.14                    |
| 1 - 2 inch Otis "X" Landing<br>Nipple                               | 0.92          | 4,289.06                    |
| 1 - 2 3/8 inch x 6 ft. EUE pup<br>joint                             | 6.52          | 4,295.58                    |

(b) Perforation Record

March 18, 1968 the Slave Point formation was perforated in the intervals 4,391 - 4,405, 4,409 - 4,412, 4,421 - 4,424 and 4,428 - 4,451 feet K.E. (Gamma Ray Neutron Log measurements) with two jets per foot (52 shots total) using a 1 11/16 inch through tubing jet gun.

(c) Cementation Record - Nil

(d) Acidizing and Fracturing Record

Two swabs were pulled to 4,000 feet resulting in a flow of approximately 300 mcf. at a tubing pressure of 30 psig. The well was acidized with 1,000 gallons of 15 percent modified HCl. The tubing pressure reached 2,000 psig. at injection rate of one barrel per minute. When the foundation broke down acid was injected at five barrels per minute and 1,500 psig. The acid was displaced with 28 barrels water and five barrels overflushed. Instantaneous shut-in pressure was 700 psig. and bled to zero psig. in seven minutes. Two swabs were pulled and the well flowed for cleanup through a 27.5/64 inch choke. The flow rate was estimated at 4.5 mmcf. with a tubing pressure of 1,220 psig.

(e) Back Pressure and Production Tests

See Absolute Open Flow Potential Test under separate cover.

(f) Schematic Diagram of downhole equipment

See attached

# Hudson's Bay Oil and Gas Company Limited

## PRODUCTION DEPARTMENT

KB Elevation: 2555.55 feet

KB to SC Flange: 12.55 "

KB to Tubing

Hanger: 10.55 "

830'

Surface Casing  
8 5/8" OD. 24 lb. J-55 ST&C

Production Casing  
5 1/2" OD. 14 lb. J-55 ST&C

Production Tubing  
2 7/8" OD. 6.5 lb. J-55 EUE

4244.63'

2 1/2" Otis "X" Landing Nipple

1 joint 2 7/8" OD Tubing

4277.92'

2 3/8" x 2 7/8" EUE Reamed Swage

2 3/8" x 5 1/2" BOT M-1 Husky Packer

4288.14'

2 3/8" x 6' EUE Pup Joint

2" Otis "N" Landing Nipple

2 3/8" OD x 6' EUE Pup Joint.

4295.58'

4391-4406

4409-4412

4421-4424

4428-4431

Perforations (2SPF)

4966'

PBD

4969'

TD

WELL NAME: HB Cameron Hills A-05  
DATE: April 3, 1968



HB CAMERON HILLS A-05

ABSOLUTE OPEN FLOW POTENTIAL TEST

MARCH 1968

W. PRENT

MEMORANDUM

April 9, 1968

TO

S. L. MORGAN

RE:

HS C MERON HILLS A-05  
ABSOLUTE OPEN FLOW POTENTIAL TEST

Introduction

During the period March 22, 1968 to March 29, 1968, a Conventional Absolute Open Flow Potential Test was performed on the subject well after its completion in the Slave Point Formation.

Chronological Summary

On March 20, 1968, testing equipment of a single stage 3 phase separator and an indirect heater was moved onto the lease. Prior to flowing the well a pressure gradient was obtained followed by running in tandem pressure recorders on March 21, 1968.

During the period March 22 to March 26 the well was flowed at four different rates. Near the end of the last rate samples were obtained. The recorders were retrieved on March 29, 1968. The well remained shut-in and padlocked.

Conclusions

The plotted back pressure curve indicates an Absolute Open Flow Potential of 8.2 MMCFD with a reciprocal "n" value of 0.795.

The shut-in bottom hole pressure after 92 hours shut-in was 1624 psia. and remained stabilized for 9 hours. The bottom hole pressure prior to flowing was 1660 psia. A decrease of 36 psi. was observed.

Absolute Open Flow Potential Test  
NE Cameron Hills -05  
Page 2

A deliverability graph indicates the well will deliver 5.3 MFCFD at 900 psig. 4.7 MFCFD at 1000 psig. and 3.9 MFCFD at 1100 psig. wellhead pressure.

Attached is a report containing an A.O.F. graph, a deliverability curve, summary of results, flowrate and pressure calculations, gas and liquid analysis and field data.

SIGNED BY  
W. PRENT

W. PRENT  
SENIOR ENGINEERING TECHNICIAN

/sc  
w/atcs.

MR. CAMERON HILLS A-05

ABSOLUTE OPEN FLOW POTENTIAL TEST

MARCH 1968

FORMATION - SLAVE POINT

BOTTOMHOLE TEMP. - 130°F

MIDPOINT PERFS. - 4411' XB

$P_1 = 1630 \text{ psi}$

$P_1^2 = 2.756 \times 10^6 \text{ psi}^2$

$(P_1^2 - P_s^2) \text{ psi}^2$

"n" = 0.795

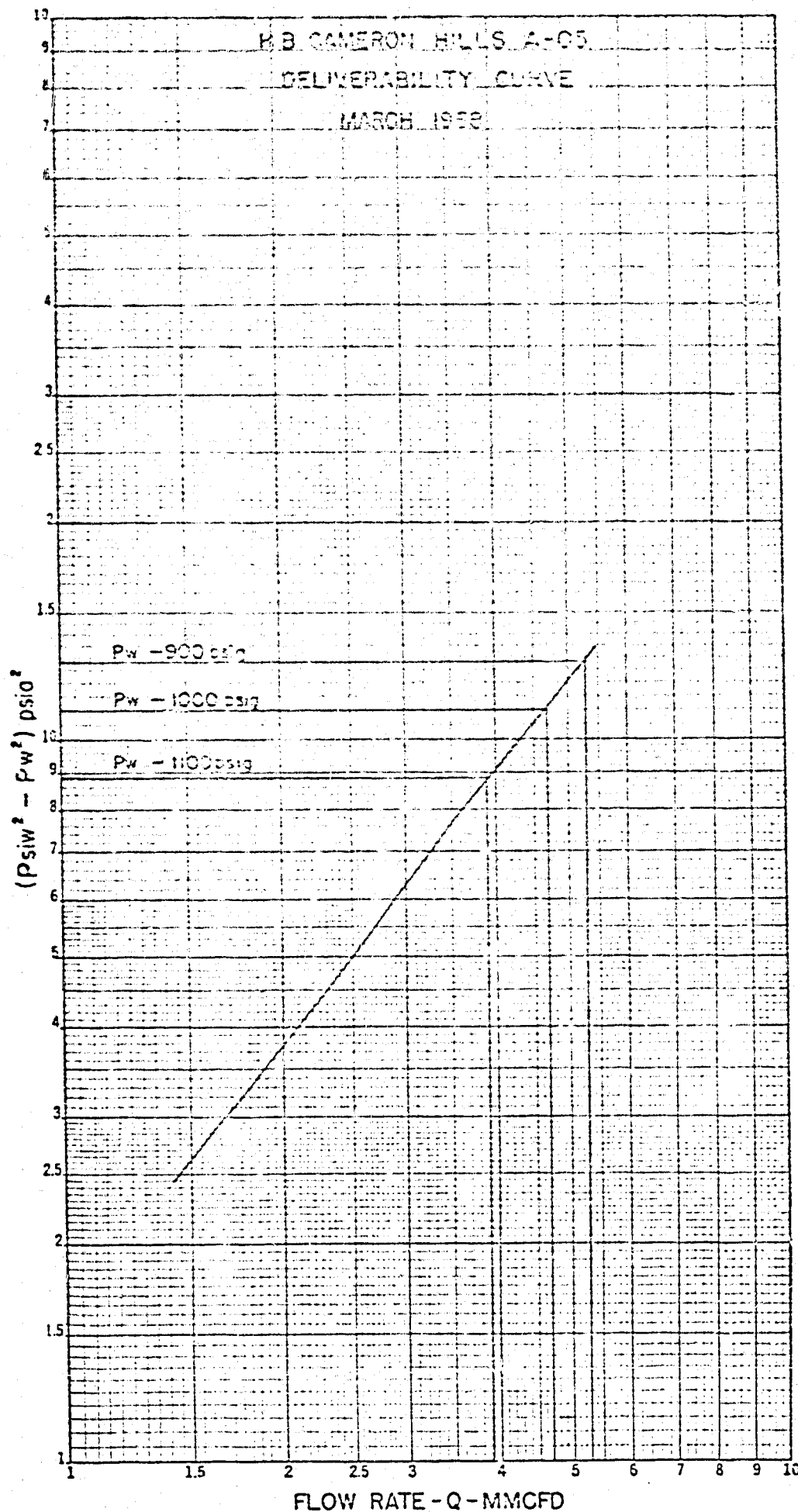
ABSOLUTE OPEN FLOW  
POTENTIAL 3.2 MMCFD

FLOW RATE - Q - MMCFD

BB CAMERON HILLS A-05

DELIVERABILITY CURVE

MARCH 1958



**HB CAMERON HILLS A-05  
SUMMARY OF RESULTS**

|                                       |                   |       |                        |
|---------------------------------------|-------------------|-------|------------------------|
| <b>Rate #1</b>                        | <b>Q</b>          | -     | 1.553                  |
|                                       | <b>Choke</b>      | -     | 13.6/64 inch           |
|                                       | <b>Tubing</b>     | -     | 1379 psia              |
|                                       | <b>BHP</b>        | -     | 1557 psia              |
|                                       | <b>No Fluid</b>   | -     |                        |
| <br><b>Rate #2</b>                    | <br><b>Q</b>      | <br>- | <br>2.573 MMCFD        |
|                                       | <b>Choke</b>      | -     | 17/64 inch             |
|                                       | <b>Tubing</b>     | -     | 1259 psia              |
|                                       | <b>BHP</b>        | -     | 1462 psia              |
|                                       | <b>GOR</b>        | -     | 1,280,000 cu. ft./bbl. |
|                                       | <b>Condensate</b> | -     | 0.8 bbl./MMCF          |
| <br><b>Rate #3</b>                    | <br><b>Q</b>      | <br>- | <br>3.637 MMCFD        |
|                                       | <b>Choke</b>      | -     | 22/64 inch             |
|                                       | <b>Tubing</b>     | -     | 1150 psia              |
|                                       | <b>BHP</b>        | -     | 1353 psia              |
|                                       | <b>GOR</b>        | -     | 757,800 cu.ft./bbl.    |
|                                       | <b>Condensate</b> | -     | 1.3 bbls./MMCF         |
| <br><b>Rate #4</b>                    | <br><b>Q</b>      | <br>- | <br>5.548 MMCFD        |
|                                       | <b>Choke</b>      | -     | 37/64 inch             |
|                                       | <b>Tubing</b>     | -     | 839 psia               |
|                                       | <b>BHP</b>        | -     | 1085 psia              |
|                                       | <b>GOR</b>        | -     | 1,156,000 cu.ft./bbl.  |
|                                       | <b>Condensate</b> | -     | 0.9 bbls./MMCF         |
| <br><b>Shut-In BHP</b>                | :                 | 1660  | psia                   |
| <b>Shut-In Tubing</b>                 | :                 | 1464  | psia                   |
| <b>Calculated AOF</b>                 | :                 | 8.2   | MMCFD                  |
| <b>"n" Value</b>                      | :                 | 0.795 |                        |
| <b>Total Gas Flared</b>               | :                 | 9.18  | MMCF                   |
| <br><b>Deliverability at 900 psig</b> | :                 | 5.3   | MMCFD                  |
| <b>" " " at 1000psig</b>              | :                 | 4.7   | MMCFD                  |
| <b>" " " at 1100psig</b>              | :                 | 3.9   | MMCFD                  |

# FLOW RATE CALCULATIONS

(Factors taken from "Orifice Metering of Natural Gas"  
Gas Measurement Committee Report No. 3)

Where  $Q = F_b \times F_{pb} \times F_{tf} \times F_g \times F_{pv} \times V_{hw} \times 24 = \text{SCFD}$

$F_b$  = basic orifice factor

$F_g$  = specific gravity factor

$F_{pb}$  = pressure base factor

$F_{pv}$  = super compressibility factor

$F_{tf}$  = flowing temp factor

$P_s$  = static pressure

$z$  = compressibility factor

$H_w$  = differential

Correction Factor  $z$  = compressibility  
correction for sour natural gases

WELL NE Cameron Hills A-05

LINE SIZE 2.980 inch

| Rate                      | 1      | 2      | 3      | 4      | 5 |
|---------------------------|--------|--------|--------|--------|---|
| Orifice Size              | 1.000  | 1.250  | 1.250  | 1.750  |   |
| $F_b$                     | 204.04 | 323.63 | 323.63 | 674.44 |   |
| $F_{pb}$                  | 1.0055 | 1.0055 | 1.0055 | 1.0055 |   |
| Flowing Temp °F           | 99     | 96     | 94     | 92     |   |
| $F_{tf}$                  | 0.9645 | 0.9671 | 0.9688 | 0.9706 |   |
| Spec. Gravity             | 0.610  | 0.610  | 0.610  | 0.610  |   |
| $F_g$                     | 1.2804 | 1.2804 | 1.2804 | 1.2804 |   |
| Static psia               | 764    | 764    | 764    | 774    |   |
| Diff "H <sub>2</sub> O    | 78     | 84     | 167    | 88     |   |
| $V_{p} \sqrt{H_w}$        | 243.97 | 253.33 | 357.19 | 260.98 |   |
| $P_c$                     | 681.0  | 681.0  | 681.0  | 681.0  |   |
| $T_c$                     | 355.7  | 355.7  | 355.7  | 355.7  |   |
| $P_r$                     | 1.12   | 1.12   | 1.12   | 1.14   |   |
| $T_r$                     | 1.57   | 1.56   | 1.56   | 1.55   |   |
| $z$                       |        |        |        |        |   |
| Corrected $z$ Factor      |        |        |        |        |   |
| $z$ Cor.                  |        |        |        |        |   |
| $\frac{1}{z}$ or $F_{pv}$ | 1.048  | 1.051  | 1.051  | 1.051  |   |

| Rate No. | $x F_b$ | $x F_{pb}$ | $x F_{tf}$ | $x F_g$ | $x F_{pv}$ | $x V_{hw} \sqrt{P}$ | $x 24 = \text{SCFD}$ |
|----------|---------|------------|------------|---------|------------|---------------------|----------------------|
| 1        | 204.04  | 1.0055     | 0.9645     | 1.2804  | 1.048      | 243.97              | 1.555                |
| 2        | 323.63  | 1.0055     | 0.9671     | 1.2804  | 1.051      | 253.33              | 2.575                |
| 3        | 323.63  | 1.0055     | 0.9688     | 1.2804  | 1.051      | 357.19              | 3.637                |
| 4        | 674.44  | 1.0055     | 0.9706     | 1.2804  | 1.051      | 260.98              | 5.548                |
| 5        |         |            |            |         |            |                     |                      |

### CALCULATION PRESSURES

The flowing bottom hole pressures obtained at run depth 4186 feet C.F. were extrapolated to midpoint perforations 4411 feet KB using a gradient of 0.0463 psi. per foot for shut-in and first rate and a gradient of 0.0700 psi. per foot for rates two, three and four.

The obtained pressures are:

|         |                                   |             |
|---------|-----------------------------------|-------------|
| Shut-In | $1635.4 + 225 \times 0.0463 + 14$ | = 1660 psia |
| Rate #1 | $1532.1 + 225 \times 0.0463 + 14$ | = 1557 psia |
| Rate #2 | $1431.8 + 225 \times 0.0700 + 14$ | = 1462 psia |
| Rate #3 | $1399.2 + 225 \times 0.0700 + 14$ | = 1339 psia |
| Rate #4 | $1041.4 + 225 \times 0.0700 + 14$ | = 1071 psia |

$$p_r^2 - p_e^2 \quad (\text{psia}^2)$$

|         |                     |                   |
|---------|---------------------|-------------------|
| Rate #1 | $9.311 \times 10^6$ | psia <sup>2</sup> |
| Rate #2 | $0.618 \times 10^6$ | psia <sup>2</sup> |
| Rate #3 | $0.953 \times 10^6$ | psia <sup>2</sup> |
| Rate #4 | $1.609 \times 10^6$ | psia <sup>2</sup> |





1

## 2. GAUGE AND WELL DATA

### 3 ACOUSTICAL WELL SOUNDER DATA

#### 4 CHART READINGS AND CALCULATIONS

## 5. FLOW RATE DATA

ATTACHED

SEE REMARKS 10

201 44-4484

NOT REQUIRED

2-7/8" TUBING TO 4295' KB

JOHNSTON TESTERS LTD HIGH LEVEL TEST BY C.R. CONNER COMPUTED BY J.C. RUSSELL CHECK BY



# SUBSURFACE PRESSURE MEASUREMENTS

## 1. BASIC WELL DATA

COMPANY HUDSON'S BAY OIL AND GAS WELL NAME H. B. CAMERON HILLS  
 ADDRESS 11630 KINGSWAY AVENUE, EDMONTON LOCATION 8A-05  
 DATE MARCH 21, 1968  
 TIME 10:15 HRS.  
 WELL DEPTH 4186 FEET  
 ELEVATION 2543 FEET  
 PRESSURE 2556 PSI  
 POOL DATUM 13.0'  
 PRESSURE 4391 PSI  
 PRESSURE 4431 PSI  
 PRESSURE 4411 PSI

## 2. GAS AND WELL DATA

SURVEY 713N 0-3750  
 ELEMENT 1895.6 -2.5  
 TEMPERATURE 130  
 PRESSURE 150 8690 2949  
 DATE MARCH 5, 1968  
 TIME 3/21/68 2155 3/29/68 0755

## 3. ACOUSTICAL WELL SOUNDER DATA

AVERAGE TUBING JOINT LENGTH  
 LENGTH OF GAS COLUMN  
 GAS COLUMN PRESSURE  
 PUMP TRIP DEPTH FROM  
 CURRENT WATER CUT  
 LIQUID COLUMN PRESSURE

## 4. CHART READINGS AND CALCULATIONS

| DATE                                             | DEPTH BELOW KB | TIME      | DETECTION | CALCULATED PRESSURE | CORRECTION | CORRECTED PRESSURE | GRADIENT |
|--------------------------------------------------|----------------|-----------|-----------|---------------------|------------|--------------------|----------|
| RECORDERS ON BOTTOM @ 2155 HRS. MARCH 21, 1968   |                |           |           |                     |            |                    |          |
| WELL SHUT-IN                                     |                |           |           |                     |            |                    |          |
| MAR. 21                                          | 4186           | 2155 HRS. | 8652      | 1637.6              | -2.4       | 1635.4             |          |
| MAR. 22                                          | 4186           | 0950 HRS. | 8652      | 1637.6              | -2.4       | 1635.4             |          |
| # 1 FLOW RATE STARTED @ 0950 HRS. MARCH 22, 1968 |                |           |           |                     |            |                    |          |
| MAR. 22                                          | 4186           | 1000 HRS. | 7758      | 1468.1              | -2.5       | 1465.6             |          |
|                                                  |                | 1015      | 7690      | 1455.2              | -2.5       | 1452.7             |          |
|                                                  |                | 1030      | 7660      | 1442.5              | -2.5       | 1447.0             |          |
|                                                  |                | 1045      | 7201      | 1362.5              | -2.2       | 1360.3             |          |
| MAR. 22                                          | 4186           | 1100 HRS. | 7161      | 1354.9              | -2.2       | 1352.7             |          |

## 5. FLOW RATE DATA

2-7/8" TUBING TO 4295 K.  
 TOTAL SHUT-IN HOURS CALCULATED TO 0500 HRS. MARCH 29, 1968  
 BOTTOM RECORDER

JOHNSTON TESTERS LTD. HIGH LEVEL TEST BY C.R. CONNER COMPUTED BY J.C. RUSSELL CHECK BY

## JOHNSTON TESTERS

FIELD MARCH 21, 1968 PAGE 2 OF 4  
 WELL H.B. CAMERON HILLS #A-05 STATUS        ZONE         
 PURPOSE AND PROCEDURE TO OBTAIN BOTTOM HOLE FLOWING AND BUILD-UP PRESSURES.

## CALCULATIONS

| DATE                                             | DEPTH<br>BELOW<br>KB | TIME      | DEFLECTION<br>IN<br>INCHES | PC<br>PRESSURE<br>PSIG | CORRECTION<br>PC | CORRECTED<br>PRESSURE<br>PSIG | GRADIENT<br>PSIG/IN |
|--------------------------------------------------|----------------------|-----------|----------------------------|------------------------|------------------|-------------------------------|---------------------|
| MAR. 22                                          | 4186                 | 1130 HRS. | .7155                      | 1353.8                 | -2.2             | 1351.6                        |                     |
|                                                  |                      | 1200      | .7150                      | 1352.9                 | -2.2             | 1350.7                        |                     |
|                                                  |                      | 1300      | .7141                      | 1351.1                 | -2.2             | 1348.9                        |                     |
|                                                  |                      | 1400      | .7130                      | 1349.1                 | -2.2             | 1346.9                        |                     |
|                                                  |                      | 1500      | .7167                      | 1356.1                 | -2.2             | 1353.9                        |                     |
|                                                  |                      | 1600      | .7151                      | 1353.0                 | -2.2             | 1350.8                        |                     |
|                                                  |                      | 1700      | .7151                      | 1353.0                 | -2.2             | 1350.8                        |                     |
| MAR. 22                                          | 4186                 | 1750 HRS. | .7151                      | 1353.0                 | -2.2             | 1350.8                        |                     |
| WELL SHUT-IN @ 1750 HRS. MARCH 22, 1968          |                      |           |                            |                        |                  |                               |                     |
| MAR. 22                                          | 4186                 | 1800 HRS. | .7898                      | 1494.6                 | -2.5             | 1492.1                        |                     |
|                                                  |                      | 1830      | .8054                      | 1524.2                 | -2.5             | 1521.7                        |                     |
|                                                  |                      | 1900      | .8081                      | 1529.3                 | -2.5             | 1526.8                        |                     |
|                                                  |                      | 2000      | .8109                      | 1534.6                 | -2.5             | 1532.1                        |                     |
|                                                  |                      | 2100      | .8118                      | 1536.3                 | -2.5             | 1533.8                        |                     |
|                                                  |                      | 2200      | .8120                      | 1536.7                 | -2.5             | 1534.2                        |                     |
|                                                  |                      | 2300      | .8120                      | 1536.7                 | -2.5             | 1534.2                        |                     |
| MAR. 22                                          | 4186                 | 2400 HRS. | .8118                      | 1536.3                 | -2.5             | 1534.2                        |                     |
| MAR. 23                                          | 4186                 | 0215 HRS. | .8109                      | 1534.6                 | -2.5             | 1532.1                        |                     |
| # 2 FLOW RATE STARTED @ 0215 HRS. MARCH 23, 1968 |                      |           |                            |                        |                  |                               |                     |
| MAR. 23                                          | 4186                 | 0230 HRS. | .7747                      | 1466.0                 | -2.5             | 1463.5                        |                     |
|                                                  |                      | 0300      | .7650                      | 1447.6                 | -2.5             | 1445.1                        |                     |
|                                                  |                      | 0400      | .7631                      | 1444.0                 | -2.5             | 1441.5                        |                     |
|                                                  |                      | 0500      | .7621                      | 1442.1                 | -2.5             | 1439.6                        |                     |
|                                                  |                      | 0600      | .7613                      | 1440.6                 | -2.5             | 1438.1                        |                     |
|                                                  |                      | 0700      | .7608                      | 1439.7                 | -2.4             | 1437.3                        |                     |
|                                                  |                      | 0800      | .7601                      | 1438.3                 | -2.4             | 1435.9                        |                     |
|                                                  |                      | 1000      | .7593                      | 1436.8                 | -2.4             | 1434.4                        |                     |
|                                                  |                      | 1200      | .7590                      | 1436.3                 | -2.4             | 1433.9                        |                     |
|                                                  |                      | 1400      | .7598                      | 1437.8                 | -2.4             | 1435.4                        |                     |
|                                                  |                      | 1600      | .7574                      | 1433.2                 | -2.4             | 1430.8                        |                     |
|                                                  |                      | 1800      | .7571                      | 1432.7                 | -2.4             | 1430.3                        |                     |
|                                                  |                      | 2000      | .7569                      | 1432.3                 | -2.4             | 1429.9                        |                     |
| MAR. 23                                          | 4186                 | 2130 HRS. | .7579                      | 1434.2                 | -2.4             | 1431.8                        |                     |
| # 3 FLOW RATE STARTED @ 2130 HRS. MARCH 23, 1968 |                      |           |                            |                        |                  |                               |                     |
| MAR. 23                                          | 4186                 | 2145 HRS. | .7049                      | 1333.7                 | -2.2             | 1331.5                        |                     |
|                                                  |                      | 2200      | .7000                      | 1324.4                 | -2.1             | 1322.3                        |                     |
|                                                  |                      | 2230      | .6969                      | 1318.5                 | -2.1             | 1316.4                        |                     |
|                                                  |                      | 2300      | .6958                      | 1316.5                 | -2.0             | 1314.5                        |                     |
| MAR. 23                                          | 4186                 | 2400 HRS. | .6949                      | 1314.8                 | -2.0             | 1312.8                        |                     |
| MAR. 24                                          | 4186                 | 0200 HRS. | .6941                      | 1313.2                 | -2.0             | 1311.2                        |                     |
|                                                  |                      | 0400      | .6936                      | 1312.3                 | -2.0             | 1310.3                        |                     |
| MAR. 24                                          | 4186                 | 0600 HRS. | .6930                      | 1311.2                 | -2.0             | 1309.2                        |                     |
| # 4 FLOW RATE STARTED @ 0600 HRS. MARCH 24, 1968 |                      |           |                            |                        |                  |                               |                     |

HUDSON'S BAY OIL AND GAS COMPANY LIMITED  
 COMPANY  
 SUB-SURFACE PRESSURE SURVEY

H.B. CAMERON HILLS #A-05  
 WELL NAME AND NUMBER

# JOHNSTON TESTERS

FIELD \_\_\_\_\_ DATE MARCH 21, 1968 PAGE 3 OF 4  
 WELL H.B. CAMERON HILLS #A-05 STATUS \_\_\_\_\_ ZONE \_\_\_\_\_  
 PURPOSE AND PROCEDURE TO OBTAIN BATCH HOLE FLOWING AND BUILD-UP PRESSURES.

## CALCULATIONS

| DATE                                    | DEPTH<br>BELOW<br>KB | TIME      | DEFLECTION<br>IN<br>INCHES | PC<br>PRESSURES<br>PSIG | CORRECT-<br>ION<br>P.P.C. | CORRECTED<br>PRESSURE<br>PSIG | GRADIENT<br>PSIG/IN |
|-----------------------------------------|----------------------|-----------|----------------------------|-------------------------|---------------------------|-------------------------------|---------------------|
| MAR. 24                                 | 4186                 | 0615 HRS. | .5851                      | 1106.6                  | -1.0                      | 1105.6                        |                     |
|                                         |                      | 0630      | .5830                      | 1064.7                  | -0.7                      | 1064.0                        |                     |
|                                         |                      | 0700      | .5541                      | 1047.9                  | -0.6                      | 1047.3                        |                     |
|                                         |                      | 0800      | .5519                      | 1043.7                  | -0.6                      | 1043.1                        |                     |
|                                         |                      | 0900      | .5509                      | 1041.8                  | -0.6                      | 1041.2                        |                     |
|                                         |                      | 1000      | .5528                      | 1045.4                  | -0.6                      | 1044.8                        |                     |
|                                         |                      | 1100      | .5500                      | 1040.1                  | -0.6                      | 1039.5                        |                     |
|                                         |                      | 1200      | .5500                      | 1040.1                  | -0.6                      | 1039.5                        |                     |
|                                         |                      | 1400      | .5490                      | 1038.2                  | -0.6                      | 1037.6                        |                     |
|                                         |                      | 1600      | .5518                      | 1043.5                  | -0.6                      | 1042.9                        |                     |
|                                         |                      | 1800      | .5521                      | 1044.1                  | -0.6                      | 1043.5                        |                     |
|                                         |                      | 2000      | .5519                      | 1043.7                  | -0.6                      | 1043.1                        |                     |
|                                         |                      | 2200      | .5510                      | 1042.0                  | -0.6                      | 1041.4                        |                     |
| MAR. 24                                 | 4186                 | 2400 HRS. | .5505                      | 1041.0                  | -0.5                      | 1041.4                        |                     |
| WELL SHUT-IN @ 2400 HRS. MARCH 24, 1968 |                      |           |                            |                         |                           |                               |                     |
| MAR. 25                                 | 4186                 | 0015 HRS. | .7730                      | 1462.8                  | -2.5                      | 1060.3                        |                     |
|                                         |                      | 0030      | .7920                      | 1498.8                  | -2.5                      | 1096.3                        |                     |
|                                         |                      | 0100      | .7980                      | 1510.2                  | -2.5                      | 1507.7                        |                     |
|                                         |                      | 0130      | .8060                      | 1525.4                  | -2.5                      | 1522.9                        |                     |
|                                         |                      | 0200      | .8101                      | 1535.1                  | -2.5                      | 1530.6                        |                     |
|                                         |                      | 0300      | .8141                      | 1540.7                  | -2.5                      | 1538.2                        |                     |
|                                         |                      | 0400      | .8170                      | 1546.2                  | -2.5                      | 1543.7                        |                     |
|                                         |                      | 0500      | .8196                      | 1551.1                  | -2.5                      | 1548.6                        |                     |
|                                         |                      | 0600      | .8210                      | 1553.8                  | -2.5                      | 1551.3                        |                     |
|                                         |                      | 0700      | .8227                      | 1557.0                  | -2.5                      | 1554.5                        |                     |
|                                         |                      | 0800      | .8241                      | 1559.7                  | -2.5                      | 1557.2                        |                     |
|                                         |                      | 1000      | .8265                      | 1564.2                  | -2.5                      | 1561.7                        |                     |
|                                         |                      | 1200      | .8281                      | 1567.2                  | -2.5                      | 1564.7                        |                     |
|                                         |                      | 1400      | .8300                      | 1570.8                  | -2.5                      | 1568.3                        |                     |
|                                         |                      | 1600      | .8310                      | 1572.7                  | -2.5                      | 1570.2                        |                     |
|                                         |                      | 2000      | .8337                      | 1577.9                  | -2.5                      | 1575.4                        |                     |
| MAR. 25                                 | 4186                 | 2400 HRS. | .8350                      | 1580.3                  | -2.5                      | 1577.8                        |                     |
| MAR. 26                                 | 4186                 | 0400 HRS. | .8368                      | 1583.7                  | -2.5                      | 1581.2                        |                     |
|                                         |                      | 0800      | .8380                      | 1586.0                  | -2.5                      | 1583.5                        |                     |
|                                         |                      | 1200      | .8389                      | 1587.7                  | -2.5                      | 1585.2                        |                     |
|                                         |                      | 1600      | .8399                      | 1589.6                  | -2.5                      | 1587.1                        |                     |
|                                         |                      | 2000      | .8404                      | 1590.6                  | -2.5                      | 1588.1                        |                     |
| MAR. 26                                 | 4186                 | 2400 HRS. | .8411                      | 1591.9                  | -2.5                      | 1589.4                        |                     |
| MAR. 27                                 | 4186                 | 0400 HRS. | .8420                      | 1593.6                  | -2.5                      | 1591.1                        |                     |
|                                         |                      | 0800      | .8427                      | 1594.9                  | -2.5                      | 1592.4                        |                     |
|                                         |                      | 1200      | .8433                      | 1596.1                  | -2.5                      | 1593.6                        |                     |
|                                         |                      | 1600      | .8439                      | 1597.2                  | -2.4                      | 1594.8                        |                     |
|                                         |                      | 2000      | .8443                      | 1598.0                  | -2.4                      | 1595.6                        |                     |
| MAR. 27                                 | 4186                 | 2400 HRS. | .8448                      | 1598.9                  | -2.4                      | 1596.5                        |                     |
| MAR. 28                                 | 4186                 | 0400 HRS. | .8452                      | 1599.7                  | -2.4                      | 1597.3                        |                     |
|                                         |                      | 0800      | .8456                      | 1600.4                  | -2.4                      | 1598.0                        |                     |
|                                         |                      | 1200      | .8459                      | 1601.0                  | -2.4                      | 1598.6                        |                     |
| MAR. 28                                 | 4186                 | 1600 HRS. | .8460                      | 1601.2                  | -2.4                      | 1598.8                        |                     |

HUDSON'S OIL AND GAS COMPANY LIMITED  
 COMPANY  
 SUB-SURFACE PRESSURE SURVEY

H.B. CAMERON HILLS #A-05  
 WELL NAME AND NUMBER

## JOHNSTON TESTERS

FIELD \_\_\_\_\_ DATE MARCH 21, 1968 PAGE 4 OF 4  
WELL H.B. CAMERON HILLS #A-05 STATUS \_\_\_\_\_ ZONE \_\_\_\_\_  
PURPOSE AND PROCEDURE TO OBTAIN BOTTOM HOLE FLOWING AND BUILD-UP PRESSURES.

## CALCULATIONS

[illegible]

CC-00000000

HUDSON'S BAY OIL AND GAS COMPANY LIMITED, SUB-SURFACE PRESSURE SURVEY

H.B. CAMERON HILLS #A-05  
WELL NAME AND NUMBER



## SUBSURFACE PRESSURE MEASUREMENTS

## 1 BASIC WELL DATA

|                               |                                 |              |                    |
|-------------------------------|---------------------------------|--------------|--------------------|
| COMPANY                       | HUDSON'S BAY OIL AND GAS        | WELL NAME    | H.B. CAMERON HILLS |
| ADDRESS                       | 11650 KINGSWAY AVENUE, EDMONTON | LOCATION     | PA-05              |
| DATE                          | MARCH 24/68 @ 2400 HRS.         | DATE OF TEST | MARCH 21, 1968     |
| TIME                          |                                 | TIME OF TEST | 07 HRS.            |
| WELL RUNNING DEPTH FROM OF    |                                 | WELL DEPTH   | 4391               |
| ELEVATION OF CASING FLANGE OF | 2543 GL                         | WELL DEPTH   | 4431               |
| WELL DEPTH                    | 2556                            | WELL DEPTH   | 4411 KB            |
| WELL DEPTH                    | 13.0'                           |              |                    |

## 2 GAUGE AND WELL DATA

|                               |        |                               |               |
|-------------------------------|--------|-------------------------------|---------------|
| WELL DEPTH                    | 20436N | WELL DEPTH                    | 0-3800        |
| ELEVATION OF CASING FLANGE OF | 1949.1 | ELEVATION OF CASING FLANGE OF | 150           |
| WELL DEPTH                    | 1949.1 | WELL DEPTH                    | 5680          |
| WELL DEPTH                    | 1949.1 | WELL DEPTH                    | 20625         |
| WELL DEPTH                    | 1949.1 | WELL DEPTH                    | MARCH 4, 1968 |
| WELL DEPTH                    | 1949.1 | WELL DEPTH                    | 3/21/68 2155  |
| WELL DEPTH                    | 1949.1 | WELL DEPTH                    | 3/29/68 0755  |
| WELL DEPTH                    | 1949.1 | WELL DEPTH                    |               |
| WELL DEPTH                    | 1949.1 | WELL DEPTH                    |               |
| WELL DEPTH                    | 1949.1 | WELL DEPTH                    |               |

## 3 ACOUSTICAL WELL SOUNDER DATA

|                             |  |                             |  |
|-----------------------------|--|-----------------------------|--|
| AVERAGE TUBING JOINT LENGTH |  | AVERAGE TUBING JOINT LENGTH |  |
| LENGTH OF GAS COLUMN        |  | LENGTH OF GAS COLUMN        |  |
| GAS COLUMN PRESSURE         |  | GAS COLUMN PRESSURE         |  |
| FLOOD HOSE DEPTH FROM OF    |  | FLOOD HOSE DEPTH FROM OF    |  |
| CURRENT WATER C/L           |  | CURRENT WATER C/L           |  |
| WELL DEPTH                  |  | WELL DEPTH                  |  |
| WELL DEPTH                  |  | WELL DEPTH                  |  |

## 4 CHART READINGS AND CALCULATIONS

| DATE                                             | DEPTH BELOW KB | TIME      | DEFLECTION IN INCHES | CALCULATED PRESSURE PSIG | CONVERSION P. TO PC PSIG | CORRECTED PRESSURE PSIG | GRADIENT PSIG FT |
|--------------------------------------------------|----------------|-----------|----------------------|--------------------------|--------------------------|-------------------------|------------------|
| RECORDERS ON BOTTOM @ 2155 HRS. MARCH 21, 1968   |                |           |                      |                          |                          |                         |                  |
| WELL SHUT-IN                                     |                |           |                      |                          |                          |                         |                  |
| MAR. 21                                          | 4186           | 2155 HRS. | .8330                | 1616.1                   | -3.2                     | 1612.9                  |                  |
| MAR. 22                                          | 4186           | 0950 HRS. | .8325                | 1615.1                   | -3.2                     | 1612.9                  |                  |
| # 1 FLOW RATE STARTED @ 0950 HRS. MARCH 22, 1968 |                |           |                      |                          |                          |                         |                  |
| MAR. 22                                          | 4186           | 1750 HRS. | .6871                | 1331.7                   | -2.7                     | 1329.0                  |                  |
| WELL SHUT-IN @ 1750 HRS. MARCH 22, 1968          |                |           |                      |                          |                          |                         |                  |

## 5 FLOW RATE DATA

|                                                            |                     |                           |              |
|------------------------------------------------------------|---------------------|---------------------------|--------------|
| ATTACHED                                                   | SEE REMARKS         | NOT AVAILABLE             | NOT REQUIRED |
| PRESSURES REJECTED, BELLOWS EXTENDED.                      |                     |                           |              |
| SET COLLAR STOP @ 4186' KB                                 |                     |                           |              |
| 2-7/8" TUBING 4295 KB                                      |                     |                           |              |
| TOTAL SHUT-IN HOURS CALCULATED TO 1500 HRS. MARCH 28, 1968 |                     |                           |              |
| JOHNSTON TESTERS LTD HIGH LEVEL                            | TEST BY C.R. CONNER | COMPLETED BY J.C. RUSSELL | CHECK BY     |

HUDSON'S BAY OIL AND GAS COMPANY LIMITED

H.B. CAMERON HILLS PA-05

## JOHNSTON TESTERS

FILED \_\_\_\_\_ DATE MARCH 21, 1968 PAGE 2 OF 2  
 WILL H.B. CAMERON HILLS #A-05  
 PURPOSE AND PROCEDURE TO OBTAIN BOTTOM HOLE BUILD-UP PRESSURES.

## CALCULATIONS

| DATE    | DEPTH<br>BELOW<br>FB | TIME                                             | DEFLECTION<br>IN<br>INCHES | PO<br>PRESSURE<br>LBS | CORRECT-<br>ION<br>P.P. | CORRECTED<br>PRESSURE<br>LBS | GRADIENT<br>LBS/IN |
|---------|----------------------|--------------------------------------------------|----------------------------|-----------------------|-------------------------|------------------------------|--------------------|
| MAR. 23 | 4186                 | 0215 HRS.                                        | .7809                      | 1514.6                | -3.2                    | 1511.4                       |                    |
|         |                      | # 2 FLOW RATE STARTED @ 0215 HRS. MARCH 23, 1968 |                            |                       |                         |                              |                    |
| MAR. 23 | 4186                 | 2130 HRS.                                        | .7512                      | 1417.7                | -3.1                    | 1414.6                       |                    |
|         |                      | # 3 FLOW RATE STARTED @ 2130 HRS. MARCH 23, 1968 |                            |                       |                         |                              |                    |
| MAR. 24 | 4186                 | 0600 HRS.                                        | .6679                      | 1294.3                | -3.0                    | 1291.3                       |                    |
|         |                      | # 4 FLOW RATE STARTED @ 0600 HRS. MARCH 24, 1968 |                            |                       |                         |                              |                    |
| MAR. 24 | 4185                 | 2400 HRS.                                        | .5300                      | 1025.5                | -0.8                    | 1024.7                       |                    |
|         |                      | WELL SHUT-IN @ 2400 HRS. MARCH 24, 1968          |                            |                       |                         |                              |                    |
| MAR. 28 | 4186                 | 1500 HRS.                                        | .8179                      | 1586.7                | -3.2                    | 1583.5                       |                    |
|         |                      | CLOCK RAN OUT @ 1500 HRS. MARCH 28, 1968         |                            |                       |                         |                              |                    |
|         |                      | RECOVERED RECORDERS @ 0755 HRS. MARCH 29, 1968   |                            |                       |                         |                              |                    |
|         |                      | PRESSURES REJECTED - BELLOWS EXTENDED            |                            |                       |                         |                              |                    |

HUDSON'S BAY OIL AND GAS COMPANY LIMITED SUBSURFACE PRESSURE SURVEY

H.B. CAMERON HILLS #A-05  
WELL NAME AND NUMBER

# CHEMICAL & GEOLOGICAL LABORATORIES LTD.

Examination

Port of Origin

Country

## GAS ANALYSIS REPORT

Lab. No. \_\_\_\_\_

Received: March 27, 1968 Reported: April 1, 1968

Well: \_\_\_\_\_

Operator: \_\_\_\_\_  
\_\_\_\_\_ Limited

Field or Area: \_\_\_\_\_

Location: \_\_\_\_\_

Elev.: K.B. 1556'

Ord. 2533'

Zone and Formation: \_\_\_\_\_

Sample Interval: \_\_\_\_\_

Well production at sampling time: Oil \_\_\_\_\_

bpd;

Gas \_\_\_\_\_

MCFD;

Water \_\_\_\_\_

Spd. \_\_\_\_\_

Sampled from: \_\_\_\_\_

Sampled by: \_\_\_\_\_  
\_\_\_\_\_ Ltd.

Date: March 24,  
1968

Pressure: (a) at point of sampling \_\_\_\_\_

psig

(b) Gas Bomb pressure \_\_\_\_\_

psig

Temperature: (a) at point of sampling \_\_\_\_\_

°F

(b) Separator \_\_\_\_\_

°F

Pressures: Reservoir \_\_\_\_\_

Tubing 226 psig

Casing \_\_\_\_\_

Separator 760 psig

OTHER PERTINENT DATA Sampled at 11:30 P.M. Method of Production: Flooding

(Signed) Ron Reddihopp  
H. B. O. G.

| COMPOSITION      | % by Volume | G.P.M. in Imp. Gal. @ 60°F. & 14.65 PSIA | G.P.M. (Calculated)                                                  | SPECIFIC GRAVITY       |
|------------------|-------------|------------------------------------------|----------------------------------------------------------------------|------------------------|
| Helium           | .05         |                                          | pentanes + .054                                                      | Calculated .608        |
| Hydrogen sulfide | 1.14        |                                          | at 12 lbs. .096                                                      | by Weight .610         |
| Carbon dioxide   | 1.38        |                                          | at 15 lbs. .102                                                      | CRITICALS (Calculated) |
| Oxygen           | .00         |                                          | at 22 lbs. .120                                                      | Pc 681.0               |
| Nitrogen         | 2.03        |                                          | at 26 lbs. .134                                                      | Tc 355.7               |
| Methane          | 92.52       |                                          | VAPOR PRESSURE (Calc.) of pentanes + 10.52                           |                        |
| Ethane           | 1.52        |                                          | H <sub>2</sub> S Grains per 100 cu. ft. @ 60°F. & 14.65 p.s.i.a. 714 |                        |
| Propane          | .70         | .160                                     | GROSS B.T.U. (Calc.) @ 60°F. & 14.65 p.s.i.a. 1009.4                 |                        |
| Isobutane        | .11         | .030                                     | DEW POINT (Calc.) p.s.i.                                             | 950 1050 1200          |
| N-butane         | .21         | .055                                     | FAH 6 2 -4                                                           |                        |
| Isopentane       | .07         | .021                                     | REMARKS                                                              |                        |
| N-pentane        | .07         | .021                                     | Sample received under a pressure of 760 psig. at 74°F.               |                        |
| Hexanes          | .08         | .027                                     |                                                                      |                        |
| Heptanes +       | .06         | .025                                     |                                                                      |                        |
| TOTAL            | 100.00      | .339                                     |                                                                      |                        |



## CHEMICAL &amp; GEOLOGICAL LABORATORIES LTD.

Edmonton

Fort St. John

Calgary

LIQUID ANALYSIS REPORT Lab. No. \_\_\_\_\_ Received March 1, 1967 Reported April 1, 1967Well: Edmonton Valley 1-10 Operator: Industrials Day Oil and Gas Company LimitedField or Area: Edmonton Location: \_\_\_\_\_ Elev.: K.B. 2550' Grd. 2543'Zone and Formation: Slave Point Sample Interval: 4391' - 4431' K.B.Well production at sampling time: Oil \_\_\_\_\_ bpd, Gas 5000 MCFD; Water \_\_\_\_\_ bpdSampled from: Separator Sampled by: Thurfin Petroleum Data Ltd. Date: March 24, 1968Pressure: (a) at point of sampling 760 psig (b) Gas Bomb pressure \_\_\_\_\_ psigTemperature: (a) at point of sampling 92 °F (b) Separator 92 °FPressures: Reservoir \_\_\_\_\_ Tubing 526 psig Casing \_\_\_\_\_ Separator 760 psigOTHER PERTINENT DATA Sampled at 11:30 P.M. Method of Production: FlowingRon Red Tripp  
(Signed) R.R.T.C.

| COMPOSITION                             | LIQUID VOLUME % | MOLECULAR %   | REMARKS                                                                      |
|-----------------------------------------|-----------------|---------------|------------------------------------------------------------------------------|
| Hydrogen sulfide                        | <u>.52</u>      | <u>1.58</u>   | When sampled for analysis, the pressure was maintained at 750 psig. at 72°F. |
| Carbon dioxide                          | <u>.27</u>      | <u>.65</u>    |                                                                              |
| Nitrogen                                | <u>.07</u>      | <u>.27</u>    |                                                                              |
| Methane                                 | <u>7.87</u>     | <u>19.25</u>  |                                                                              |
| Ethane                                  | <u>1.12</u>     | <u>1.84</u>   |                                                                              |
| Propane                                 | <u>1.58</u>     | <u>2.36</u>   |                                                                              |
| Isobutane                               | <u>.67</u>      | <u>.85</u>    |                                                                              |
| N-butane                                | <u>1.94</u>     | <u>2.55</u>   |                                                                              |
| Isopentane                              | <u>.42</u>      | <u>.48</u>    |                                                                              |
| N-pentane                               | <u>1.51</u>     | <u>1.73</u>   |                                                                              |
| Hexanes                                 | <u>1.85</u>     | <u>1.86</u>   |                                                                              |
| Heptanes +                              | <u>82.18</u>    | <u>66.56</u>  |                                                                              |
| Observed Specific Gravity of <u>c7+</u> |                 | <u>.768</u>   |                                                                              |
| Observed Molecular Weight of <u>c7+</u> |                 | <u>124.00</u> |                                                                              |
| Calculated Specific Gravity of Fluid    |                 | <u>.714</u>   |                                                                              |
| Calculated Molecular Weight of Fluid    |                 | <u>93.292</u> |                                                                              |

# CHEMICAL & GEOLOGICAL LABORATORIES LTD.

Edmonton

Fort St. John

Calgary

## OIL ANALYSIS REPORT

Lab. No. 104-6474

Received: March 28, 1968 Reported April 10, 1968

Well: H.B. Cameron Hills A-05

Operator: Hudson's Bay Oil and Gas Company Limited

Field or Area: H.B.T.

Location:

Elev. K.B. 2556'

Grd. 2543'

Zone and Formation: Slave Point

Sample Interval: 4391' - 4431' Perforations

Method of Production: Flowing

Well Production or Recovery at Sampling Time: Oil 5 bbl.,  
Gas 5000 MCFD

Sampled from: Stock Tank

Sampled by: Tharin Petroleum Data Ltd.

Date: March 24, 1968

## OTHER PERTINENT DATA

Pressure at point of sampling: 760 psig.

Temperature at point of sampling: 92°F.

Pressures: Tubing 826 psig., Separator 760 psig.

(Signed) Ron Reddekopp - H.B.T.C.

COLOR Yellow 11 ASTM Colour

ENGINEER (ASTM D-86)

DISTILLATION

B.S.&W. Total --- % Water --- % Sediment --- %

Barometric Pressure 715.8 mm.

Room Temp. 71 °F

Gravity: Specific 0.769 at 60/60°F.

A.P.I. 52.5° at 60/60°F.

Total Sulfur 0.08 % (by weight)

Pour Point --- °F.

Salt Content --- lbs. per 1000 bbls. crude.

Reid Vapor Pressure 0.6 psig. at 100°F.

Conradson Carbon --- % (by weight)

## Viscosities:

| Temp.<br>°F. | Absolute<br>Centipoises | Kinematic<br>Centistokes | Saybolt Universal<br>Seconds |
|--------------|-------------------------|--------------------------|------------------------------|
|--------------|-------------------------|--------------------------|------------------------------|

| %<br>Distilled | Temp.<br>°F. |
|----------------|--------------|
|----------------|--------------|

|          |     |
|----------|-----|
| I. B. P. | 188 |
| 5        | 236 |
| 10       | 255 |
| 15       | 264 |
| 20       | 272 |
| 25       | 278 |
| 30       | 285 |
| 35       | 291 |
| 40       | 296 |
| 45       | 303 |
| 50       | 310 |
| 55       | 316 |
| 60       | 324 |
| 65       | 329 |
| 70       | 338 |
| 75       | 346 |
| 80       | 356 |
| 85       | 368 |
| 90       | 384 |
| 95       | 410 |
| F.B.P.   | 440 |

## DISTILLATION SUMMARY

|                     | %    |
|---------------------|------|
| 400°F Naptha        | ---  |
| 525°F Kerosine      | ---  |
| 650°F Light Gas Oil | ---  |
| Recovered           | 98.4 |
| Residue             | 1.6  |
| Distillation Loss   | Nil  |

## REMARKS:

On the basis of the gasoline content (410-425°F. E.P.) and the A.P.I. Gravity, this oil is of a ---

and by U.O.P. Method 375 it has a U.O.P. characterization factor of ---

Two samples were received with identical information. The analysis was performed on a combination of the two samples.

The sample (combined) contained 20% free water.

# CHEMICAL & GEOLOGICAL LABORATORIES LTD.

## WATER ANALYSIS

Lab No. F68-6474

Received: March 28, 1968 Reported: April 10, 1968 Well Location: H.B. Cameron Hills A-05

Operator: Hudson's Bay Oil and Gas Company Limited Field or Area: N.W.T.

Elev.: K.B. 2556' Grd. 2543' Zone/Formation: Slave Point

Perforations

Sample Interval 4391' - 4431' F.R.

Method of Production: Flowing Sampled from: Separator Sampled by: Tharion Petroleum Date: March 24, 1968  
Data Ltd.

### OTHER PERTINENT DATA

Well Production: Oil 5 bpd., Gas 5000 MCFD.

Pressure at point of sampling: 760 psig. Temperature at point of sampling: 92°F.

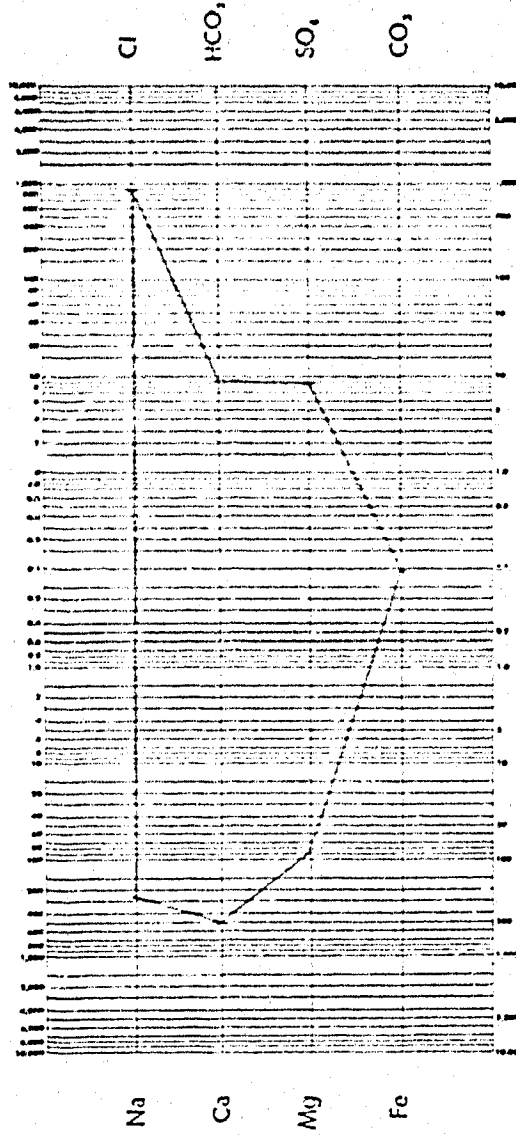
Pressures: Tubing 826 psig., Separator 760 psig.

(Signed) Ron Podolsky  
H.B.C.

|        | Na     | K | Ca     | Mg    | SO <sub>4</sub> | Cl     | CO <sub>2</sub> | HCO <sub>3</sub> |  |
|--------|--------|---|--------|-------|-----------------|--------|-----------------|------------------|--|
| Mg./L  | 6279   |   | 10715  | 1025  | 422             | 31000  |                 | 555              |  |
| Meq./L | 273.14 |   | 536.68 | 86.26 | 8.78            | 374.20 |                 | 9.10             |  |
| Meq. % | 15.31  |   | 29.97  | 4.72  | 0.49            | 49.00  |                 | 0.51             |  |

Total Solids Mg/L: By Evaporation 62,940 Fe Present Specific Gravity 1.041 @ 60°F Observed pH 7.1 @ 74°F  
Calculated 49,996 After Ignition 36,690 H<sub>2</sub>S titl Refractive Index 1.3451 @ 25°C Resistivity 0.167 ohm-meters @ 68°F

Pattern Unit Meq./L



Remarks and Conclusions: Two samples were received with identical information. The analysis was determined on a combined sample of the two. The combined sample consisted of concentrate with 20% yellowish colored free water.

Organic matter in total solids.

## FIELD NOTES FOR 3 PHASE SEPARATOR UNIT # 4

WEILL: H.B. CAMERON HILLS A-05

9-10

| TIME<br>(HRS.) |      | RUN<br>HOURS | WELLHEAD DATA            |                        |            | SEPARATOR & METER DATA |           |             |              |               | LIQUID PRODUCTION & NOTES |         |        |  |                                                                    |
|----------------|------|--------------|--------------------------|------------------------|------------|------------------------|-----------|-------------|--------------|---------------|---------------------------|---------|--------|--|--------------------------------------------------------------------|
|                |      |              | CSG<br>PSIG              | TBG<br>PSIG            | TEMP<br>°F | PRES<br>PSIG           | HW<br>IN. | TEMP.<br>°F | CHOKE<br>SET | ORIF.<br>SIZE | TANK GAUGE<br>FT. - IN.   |         |        |  |                                                                    |
| Mar. 22/68     |      |              | PACKER<br>OFF            |                        | START WELL | CLEAN UP               |           |             |              |               |                           |         |        |  |                                                                    |
|                |      |              | NIL                      |                        |            |                        |           |             |              |               |                           |         |        |  |                                                                    |
| 0900           |      |              |                          | 1449                   |            |                        |           |             |              |               |                           |         |        |  |                                                                    |
| 0950           | 0    |              |                          | 1447                   |            |                        |           |             |              |               |                           |         |        |  |                                                                    |
| 1000           |      |              |                          | 1304                   | 40°        |                        |           |             |              |               |                           |         |        |  | Opened tubing on bypass                                            |
| 1015           | 0.25 |              |                          | 1277                   | 42°        |                        |           |             |              |               |                           |         |        |  |                                                                    |
| 1030           | 0.5  |              |                          | 1273                   | 44°        |                        |           |             |              |               |                           |         |        |  |                                                                    |
| 1040           |      |              |                          | Flow through separator |            |                        |           |             |              |               |                           |         |        |  |                                                                    |
| 1045           | 0.75 |              |                          | 1210                   | 45°        |                        |           |             |              |               |                           |         |        |  | Liquid at surface                                                  |
| 1100           | 1    |              |                          | 1176                   | 47°        |                        | 735       | 75"         |              |               |                           |         |        |  |                                                                    |
| 1115           | 1.25 |              |                          | 1173                   | 48°        |                        | 733       | 76"         | 96°          |               |                           |         |        |  |                                                                    |
| 1130           | 1.5  |              |                          | 1172                   | 49°        |                        | 730       | 72"         | 96°          |               |                           |         |        |  |                                                                    |
| 1145           | 1.75 |              |                          |                        |            |                        |           |             |              |               |                           |         |        |  |                                                                    |
| 1200           | 2    |              |                          | 1172                   | 51         |                        | 730       | 72          | 96           |               |                           |         |        |  |                                                                    |
| 1300           | 3    |              |                          | 1173                   | 51         |                        | 730       | 72          | 96           |               |                           |         |        |  |                                                                    |
| 1400           | 4    |              |                          | 1172                   | 51         |                        | 740       | 74          | 95           |               |                           |         |        |  | 7 gals.                                                            |
| 1500           | 5    |              |                          | 1163                   | 54         |                        | 745       | 70          | 96           |               |                           |         |        |  |                                                                    |
| 1600           | 6    |              |                          | 1172                   | 54         |                        | 735       | 80          | 97           |               |                           |         |        |  |                                                                    |
| 1700           | 7    |              |                          | 1172                   | 55         |                        | 730       | 74          | 92           |               |                           |         |        |  |                                                                    |
| 1800           | 8    |              |                          | 1173                   | 56         |                        | 730       | 74          |              |               |                           |         |        |  | START TEST<br>Produced 7 gals. condensate on<br>this clean up run. |
|                |      |              | START BACK PRESSURE TEST |                        |            |                        |           |             |              |               |                           |         |        |  |                                                                    |
| 1800           | 0    |              | NIL                      | Start on #1 by         |            | adjusting choke to     |           |             |              |               |                           | 13/64"  | 1.000" |  |                                                                    |
| 1815           | 0.25 |              |                          | 1330                   | 56         |                        |           |             |              |               |                           |         |        |  |                                                                    |
| 1830           | 0.5  |              |                          | 1350                   | 57         |                        | 755       | 76          | 102          |               |                           | 13.5/64 | "      |  |                                                                    |
| 1900           | 1.0  |              |                          | 1356                   | 57         |                        | 755       | 76          | 100          |               |                           | "       | "      |  |                                                                    |
| 2000           | 2.0  |              |                          | 1357                   | 57         |                        | 755       | 76          | 99           |               |                           | "       | "      |  |                                                                    |
| 2100           | 3.0  |              |                          | 1357                   | 57         |                        | 750       | 78          | 96           |               |                           | "       | "      |  |                                                                    |
| 2130           | 3.5  |              |                          | 1357                   | 58         |                        | 750       | 78          | 97           |               |                           | "       | "      |  |                                                                    |
| 2200           | 4.0  |              |                          | 1357                   | 58         |                        | 750       | 78          | 96           |               |                           | "       | "      |  |                                                                    |
| 2230           | 4.5  |              |                          | 1357                   | 58         |                        | 750       | 78          | 97           |               |                           | "       | "      |  |                                                                    |
| 2300           | 5.0  |              |                          | 1357                   | 58         |                        | 750       | 78          | 97           |               |                           | "       | "      |  | Liquid at surface (slight amount)                                  |

# THARIN PETROLEUM DATA LTD.

FIELD NOTES FOR 3 PHASE SEPARATOR UNIT #4

WELL: H. B. CHAFRON HILLS A-05

DATE: Mar. 22 22623196 8 2 980' METER RUN

PAGE 2

OF 6

| TIME<br>(HRS.)<br>Mar. 22      | RUN<br>HOURS | WELLHEAD DATA |                                    |            | SEPARATOR & METER DATA |           |             |              |               | LIQUID PRODUCTION & NOTES |                |                |
|--------------------------------|--------------|---------------|------------------------------------|------------|------------------------|-----------|-------------|--------------|---------------|---------------------------|----------------|----------------|
|                                |              | CSG<br>PS/G   | TBG<br>PSIG                        | TEMP<br>°F | PRES<br>PSIG           | HW<br>IN. | TEMP.<br>°F | CHOKE<br>SET | ORIF.<br>SIZE | TANK GAUGE<br>FT. IN      | Cond.<br>Gals. | Total<br>Gals. |
|                                |              | PACKER<br>OFF |                                    |            |                        |           |             |              |               |                           |                |                |
| 2330                           | 5.5          | NIL           | 1357                               | 48         | 750                    | 78        | 92          | 13.5/64      | 1.000"        |                           |                |                |
| 2400                           | 6.0          |               | 1356                               | 48         | 750                    | 78        | 95          | "            | "             |                           |                |                |
| Mar. 23                        |              |               |                                    |            |                        |           |             |              |               |                           |                |                |
| 0030                           | 6.5          |               | 1356                               | 48         | 750                    | 78        | 102         | "            | "             |                           |                |                |
| 0100                           | 7.0          |               | 1356                               | 48         | 750                    | 78        | 99          | "            | "             |                           |                |                |
| 0130                           | 7.5          |               | 1355                               | 48         | 750                    | 78        | 99          | "            | "             |                           |                |                |
| 0200                           | 8.0          |               | 1356                               | 48         | 750                    | 78        | 94          | "            | "             |                           |                |                |
| Produced no liquid in this run |              |               |                                    |            |                        |           |             |              |               |                           |                |                |
| 0200                           | 0            |               | Start Run #2 by adjusting choke to |            |                        |           | 17/64       | 1 1/4"       |               |                           |                |                |
| 0215                           | 0.25         |               | 1292                               | 48         |                        |           |             |              |               |                           | 0              | 0              |
| 0230                           | 0.50         |               | 1285                               | 48         |                        |           |             |              |               |                           | 1              | 1              |
| 0300                           | 1.0          |               | 1267                               | 49         | 755                    | 87        | 89          | "            | "             |                           | 1              | 2              |
| 0330                           | 1.5          |               | 1265                               | 49         | 750                    | 88        | 90          | "            | "             |                           | 1              | 3              |
| 0400                           | 2.0          |               | 1266                               | 49         | 750                    | 86        | 90          |              |               |                           | 1              | 4              |
| 0430                           | 2.5          |               | 1266                               | 49         | 750                    | 87        | 92          |              |               |                           | 1              | 5              |
| 0500                           | 3.0          |               | 1265                               | 49         | 750                    | 87        | 92          |              |               |                           | 1              | 6              |
| 0530                           | 3.5          |               | 1265                               | 49         | 750                    | 87        | 92          |              |               |                           | 1              | 7              |
| 0600                           | 4.0          |               | 1264                               | 49         | 750                    | 86        | 92          | "            | "             |                           | 1              | 8              |
| 0630                           |              |               | 1263                               | 49         | 745                    | 86        | 92          |              |               |                           | 1              | 9              |
| 0700                           | 5.0          |               | 1262                               | 49         | 745                    | 85        | 92          |              |               |                           | 1              | 10             |
| 0730                           |              |               | 1262                               | 49         | 745                    | 85        | 92          |              |               |                           | 2              | 11             |
| 0800                           | 6.0          |               | 1262                               | 50         | 750                    | 85        | 92          | "            | "             |                           | 1.5            | 12.5           |
| 0830                           |              |               | 1261                               | 50         | 750                    | 85        | 92          |              |               |                           | 2.5            | 15.0           |
| 0900                           | 7.0          |               | 1261                               | 52         | 750                    | 85        | 92          | "            | "             |                           | 2              | 16             |
| 0930                           |              |               | 1260                               | 54         | 750                    | 85        | 92          |              |               |                           | 2.5            | 18.5           |
| 1000                           | 8.0          |               | 1258                               | 54         | 750                    | 85        | 98          | "            | "             |                           | 2              | 20             |
| 1100                           | 9            |               | 1259                               | 53         | 750                    | 86        | 97          |              |               |                           | 1.5            | 21.5           |
| 1130                           |              |               | 1259                               | 54         | 750                    | 86        | 98          |              |               |                           | 1.5            | 23             |
| 1200                           | 10           |               | 1258                               | 54         | 755                    | 85        | 101         |              |               |                           | 2.5            | 26             |
| 1230                           |              |               | 1259                               | 54         | 760                    | 85        | 104         |              |               |                           | 2.5            | 28.5           |
| 1300                           | 11           |               | 1255                               | 54         | 765                    | 84        | 96          | "            | "             |                           | 2.0            | 30.5           |
| 1330                           |              |               | 1259                               | 55         | 750                    | 84        | 93          |              |               |                           | 2.0            | 32.5           |
| 1400                           | 12           |               | 1259                               | 55         | 750                    | 82        | 93          |              |               |                           | 2.0            | 34.5           |

## THARIN PETROLEUM DATA LTD.

## FIELD NOTES FOR 3 PHASE SEPARATOR UNIT "A"

WELL: H.B. CAMERON HILLS A-15

DATE: Mar. 23/24 1968

2.980" METER RUN

PAGE 3

OF 5

| TIME<br>(HRS.)<br>Mar. 23 | RUN<br>HOURS | WELLHEAD DATA |             |            | SEPARATOR & METER DATA |           |             |                          |               | LIQUID PRODUCTION & NOTES |                |                |                |
|---------------------------|--------------|---------------|-------------|------------|------------------------|-----------|-------------|--------------------------|---------------|---------------------------|----------------|----------------|----------------|
|                           |              | CSG<br>PSIG   | TBG<br>PSIG | TEMP<br>°F | PRES<br>PSIG           | HW<br>IN. | TEMP.<br>°F | CHOKE<br>SET             | ORIF.<br>SIZE | TANK GAUGE<br>FT. IN.     | Cond.<br>Gals. | Total<br>Gals. |                |
|                           |              | PACKER<br>OFF | CONTINUOUS  |            | RUN #                  | 2         |             |                          |               |                           |                |                |                |
| 1430                      |              | NIL           | 1260        | 55         | 745                    | 82        | 93          | 17/64                    | 1.250         |                           | 3.0            | 22             |                |
| 1500                      | 13           |               | 1258        | 55         | 750                    | 87        | 91          |                          |               |                           |                |                |                |
| 1530                      |              |               | 1260        | 55         | 750                    | 81        | 91          |                          |               |                           |                |                |                |
| 1600                      | 14           |               | 1260        | 55         | 740                    | 80        | 94          | Freezing at Choke        |               |                           | 2.5            | 24.5           | Inject Alcohol |
| 1630                      |              |               | 1257        | 55         | 750                    | 85        | 96          | "                        | "             |                           |                |                |                |
| 1700                      | 15           |               | 1256        | 55         | 750                    | 85        | 97          |                          |               |                           | 3.0            | 27.5           |                |
| 1730                      |              |               | 1255        | 55         | 750                    | 85        | 98          |                          |               |                           |                |                |                |
| 1800                      | 16           |               | 1255        | 55         | 750                    | 85        | 98          | "                        | "             |                           | 3.5            | 31             |                |
| 1830                      |              |               | 1252        | 53         | 750                    | 85        | 98          |                          |               |                           |                |                |                |
| 1900                      | 17           |               | 1252        | 48         | 750                    | 84        | 98          | "                        | "             |                           | 3.0            | 34             |                |
| 1930                      |              |               | 1253        | 48         | 750                    | 84        | 95          |                          |               |                           |                |                |                |
| 2000                      | 18           |               | 1255        | 48         | 750                    | 86        | 94          | "                        | "             |                           | 3.0            | 37             |                |
| 2030                      |              |               | 1255        | 46         | 750                    | 86        | 94          |                          |               |                           |                |                |                |
| 2100                      | 19           |               | 1255        | 46         | 750                    | 85        | 96          | Wellhead temp. hydrating |               | indicates                 | 3.0            | 40             |                |
| 2130                      |              |               | 1255        | 44         | 750                    | 84        | 96          |                          |               |                           |                |                |                |
| 2200                      | 20           |               | 1256        | 44         | 750                    | 84        | 96          | (Change to Rate 3)       |               |                           | 2.5            | 42.5           |                |
| 2230                      | Run #3       |               | 1137        | 56         | 750                    | 164       | 90          | 22/64                    | 1.250         |                           | 12.0           | 12             |                |
| 2300                      | 1            |               | 1134        | 56         | 750                    | 164       | 91          |                          |               |                           | 15.0           | 27             |                |
| 2330                      |              |               | 1137        | 56         | 750                    | 166       | 92          |                          |               |                           |                |                |                |
| 2400                      | 2            |               | 1136        | 56         | 750                    | 166       | 92          | "                        | "             |                           | 14.0           | 41             |                |
| Mar. 24                   |              |               |             |            |                        |           |             |                          |               |                           |                |                |                |
| 0030                      |              |               | 1136        | 56         | 750                    | 167       | 93          | "                        | "             |                           | 4              | 45             |                |
| 0100                      | 3            |               | 1136        | 56         | 755                    | 167       | 93          |                          |               |                           |                |                |                |
| 0130                      |              |               | 1136        | 56         | 755                    | 167       | 93          | "                        | "             |                           | 8              | 53             |                |
| 0200                      | 4            |               | 1137        | 56         | 750                    | 167       | 93          |                          |               |                           |                |                |                |
| 0230                      |              |               | 1137        | 56         | 755                    | 167       | 93          |                          |               |                           | 7              | 60             |                |
| 0300                      | 5            |               | 1136        | 57         | 740                    | 167       | 93          |                          |               |                           |                |                |                |
| 0330                      |              |               | 1136        | 58         | 750                    | 167       | 93          | "                        | "             |                           | 8              | 68             |                |
| 0400                      | 6            |               | 1136        | 58         | 750                    | 167       | 93          |                          |               |                           |                |                |                |
| 0430                      |              |               | 1136        | 59         | 750                    | 167       | 93          | "                        | "             |                           | 7              | 75             |                |
| 0500                      | 7            |               | 1136        | 59         | 750                    | 167       | 94          |                          |               |                           |                |                |                |
| 0530                      |              |               | 1136        | 59         | 750                    | 167       | 94          | "                        | "             |                           | 7              | 82             |                |
| 0600                      | 8            |               | 1136        | 59         | 750                    | 167       | 94          |                          |               |                           | 3              | 85             |                |

## THARIN PETROLEUM DATA LTD.

FIELD NOTES FOR 3 PHASE SEPARATOR UNIT #4

WELL: H.B. CAMERON HILLS A-05

DATE: Mar. 24 1968 2 980' METER RUN

PAGE 4 OF 6

| TIME<br>(HRS.)<br>MAR. 24 | RUN<br>HOURS | WELLHEAD DATA |                 |            | SEPARATOR & METER DATA |           |             |              |               | LIQUID PRODUCTION & NOTES |               |                |                      |
|---------------------------|--------------|---------------|-----------------|------------|------------------------|-----------|-------------|--------------|---------------|---------------------------|---------------|----------------|----------------------|
|                           |              | CSG<br>PSIG   | TSG<br>PSIG     | TEMP<br>°F | PRES<br>PSIG           | HW<br>IN. | TEMP.<br>°F | CHOKE<br>SET | ORIF.<br>SIZE | TANK GAUGE<br>FT. IN.     | Imp.<br>Gals. | Total<br>Gals. |                      |
|                           |              |               |                 |            |                        |           |             |              |               |                           |               |                |                      |
|                           |              | PACKER<br>OFF |                 |            |                        |           |             |              |               |                           |               |                |                      |
| 0600                      | 0            | NIL           | Start Run No. 4 |            | by adjusting choke to  | 42/64"    | 1.750       |              |               |                           |               |                |                      |
| 0630                      |              |               | 825             | 62         | 750                    | 86        | 96          |              |               |                           | 28            | 28             |                      |
| 0700                      | 1            |               | 825             | 62         | 755                    | 86        | 96          |              |               |                           |               |                |                      |
| 0730                      |              |               | 818             | 62         | 750                    | 88        | 96          |              |               |                           | 12            | 40             |                      |
| 0800                      | 2            |               | 822             | 62         | 750                    | 88        | 95          |              |               |                           |               |                |                      |
| 0830                      |              |               | 823             | 62         | 750                    | 88        | 97          |              |               |                           | 8             | 48             |                      |
| 0900                      | 3            |               | 825             | 63         | 750                    | 88        | 97          |              |               |                           |               |                |                      |
| 0930                      |              |               | 820             | 65         | 750                    | 88        | 99          |              |               |                           | 8             | 56             |                      |
| 1000                      | 4            |               | 832             | 65         | 765                    | 86        | 96          |              |               |                           |               |                |                      |
| 1030                      |              |               | 807             | 66         | 750                    | 87        | 96          |              |               |                           | 9             | 65             |                      |
| 1100                      | 5            |               | 820             | 66         | 760                    | 89        | 97          |              |               |                           |               |                |                      |
| 1130                      |              |               | 821             | 67         | 755                    | 88        | 96          |              |               |                           | 7             | 72             |                      |
| 1200                      | 6            |               | 820             | 67         | 755                    | 87        | 95          |              |               |                           |               |                |                      |
| 1230                      |              |               | 825             | 68         | 760                    | 88        | 95          |              |               |                           | 6             | 78             | Close Choke to 37/64 |
| 1300                      | 7            |               | 824             | 68         | 760                    | 90        | 94          | 37/64"       |               |                           |               |                |                      |
| 1330                      |              |               | 825             | 67         | 760                    | 88        | 93          |              |               |                           | 7             | 85             |                      |
| 1400                      | 8            |               | 822             | 67         | 760                    | 89        | 93          |              |               |                           |               |                |                      |
| 1430                      |              |               | 827             | 68         | 760                    | 88        | 93          |              |               |                           | 8             | 93             |                      |
| 1500                      | 9            |               | 831             | 68         | 760                    | 88        | 93          |              |               |                           |               |                |                      |
| 1530                      |              |               | 823             | 68         | 750                    | 88        | 92          |              |               |                           | 6             | 99             |                      |
| 1600                      | 10           |               | 830             | 68         | 760                    | 88        | 92          |              |               |                           |               |                |                      |
| 1630                      |              |               | 830             | 68         | 760                    | 88        | 92          |              |               |                           | 7             | 106            |                      |
| 1700                      | 11           |               | 830             | 68         | 760                    | 88        | 92          |              |               |                           |               |                |                      |
| 1730                      |              |               | 830             | 68         | 760                    | 88        | 92          |              |               |                           | 7             | 113            |                      |
| 1800                      | 12           |               | 827             | 68         | 760                    | 88        | 93          |              |               |                           |               |                |                      |
| 1830                      |              |               | 826             | 68         | 760                    | 88        | 92          |              |               |                           | 7             | 120            |                      |
| 1900                      | 13           |               | 827             | 68         | 760                    | 88        | 92          |              |               |                           |               |                |                      |
| 1930                      |              |               | 826             | 68         | 760                    | 88        | 92          |              |               |                           | 6             | 126            |                      |
| 2000                      | 14           |               | 826             | 68         | 760                    | 88        | 92          |              |               |                           |               |                |                      |
| 2030                      |              |               | 825             | 68         | 760                    | 88        | 92          |              |               |                           | 5.5           | 132            |                      |
| 2100                      | 15           |               | 827             | 68         | 760                    | 86        | 92          |              |               |                           |               |                |                      |
| 2130                      |              |               | 826             | 68         | 760                    | 83        | 92          |              |               |                           | 7             | 139            |                      |
| 2200                      | 16           |               | 825             | 68         | 760                    | 88        | 92          |              |               |                           |               |                |                      |
| 2230                      |              |               | 826             | 68         | 760                    | 83        | 92          |              |               |                           |               |                |                      |

Close Choke to 37/64

## FIELD NOTES FOR 3 PHASE SEPARATOR UNIT 4

DATE: Mar. 24 1968 2.980" METER RUN.

PAGE 5 OF 1

[illegible]



## FIELD NOTES FOR 3 PHASE SEPARATOR UNIT -- 4

DATE: Mar. 25 1968 2.980" METER RUN

330

[illegible]

# T.G. EASTLAND—testers Ltd.

ALBUQUERQUE NORTH EDMONTON ALBERTA - PHONE 799-3321

## SERVICE REPORT

TEST No. One  
Date Feb. 12, 1968  
Ticket No. A267

|                                                                                                                                                 |                         |                  |                                  |                                       |           |
|-------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|------------------|----------------------------------|---------------------------------------|-----------|
| Well Name H. B. Cameron Hills A-35                                                                                                              |                         |                  |                                  | Loc. 60.04' 02.15" N 117.30' 27.44" W |           |
| Formation Tested                                                                                                                                |                         |                  |                                  | TOOL ASSEMBLY                         |           |
| Interval 4379                                                                                                                                   | To 4443'                | Tail Pipe 31.43' |                                  | Components                            | Length    |
| First Flow 5 mins                                                                                                                               | Initial Shut-in 45 mins |                  |                                  | Pump Out Sub                          | 1.00      |
| Second Flow 60 mins                                                                                                                             | Final Shut-in 30 mins   |                  |                                  | Double Pin Sub                        | .82       |
| Maximum Formation Temp. °F                                                                                                                      |                         |                  |                                  | Test Tool                             | 8.43      |
| Fluid Cushion none Amount                                                                                                                       |                         |                  |                                  | Equalizing Valve                      | 2.40      |
| Total Fluid Recovered none                                                                                                                      |                         |                  |                                  | Jars                                  | 7.35      |
| Flow Rate Mcf/d Pitot Tube w/Water/Merc. in.                                                                                                    |                         |                  |                                  | Safety Joint                          | 1.79      |
| Side Static Press. Gauge psig.                                                                                                                  |                         |                  |                                  | Packer                                | 4.95      |
|                                                                                                                                                 |                         |                  |                                  | Packer                                | 4.95      |
| Fluid Description                                                                                                                               |                         |                  |                                  | Feet of Interval                      | 64.33     |
| Remarks Good initial putt. Gas to surface in 3 min.<br>Strong gas blow at 1.2 mmcf increasing to 2.<br>mmcf in 20 min. Steady through out test. |                         |                  |                                  |                                       |           |
| Was tool chased? yes 2'                                                                                                                         |                         |                  |                                  |                                       |           |
| Did mud level drop? yes 4'                                                                                                                      |                         |                  |                                  |                                       |           |
| When did mud level drop?                                                                                                                        |                         |                  |                                  |                                       |           |
| Started in Hole 5:05am                                                                                                                          |                         |                  | Out of Hole 10:00am              |                                       |           |
| Main Hole: Depth 4443'                                                                                                                          |                         |                  | Size 7 7/8"                      |                                       |           |
| Kut Hole: Depth                                                                                                                                 |                         |                  | Size                             |                                       |           |
| Casing: Depth 626'                                                                                                                              |                         |                  | Size 8 5/8" Weight 24#           |                                       |           |
| Drill Pipe Size 5 1/2"                                                                                                                          |                         |                  |                                  |                                       |           |
| Drill Collar: Size 2 7/8" I.D. Length 639.65'                                                                                                   |                         |                  |                                  |                                       |           |
| Type of Packer(s) Conv.                                                                                                                         |                         |                  | No. of Packers Two               |                                       | Witnesses |
| Size of Packer Rubber 6 1/2"                                                                                                                    |                         |                  | Co. Rep.                         |                                       |           |
| Bottom Choke Size 1/2"                                                                                                                          |                         |                  | Tester Ron Fehler                |                                       |           |
| Drilling Fluid Type GYP                                                                                                                         |                         |                  | Toolpusher Mr. Haines            |                                       |           |
| Viscosity 60 Weight 9.5 W.L. 13.8                                                                                                               |                         |                  | Drig. Cont. S & T Drig. Rig #1-F |                                       |           |

## PRESSURE DATA

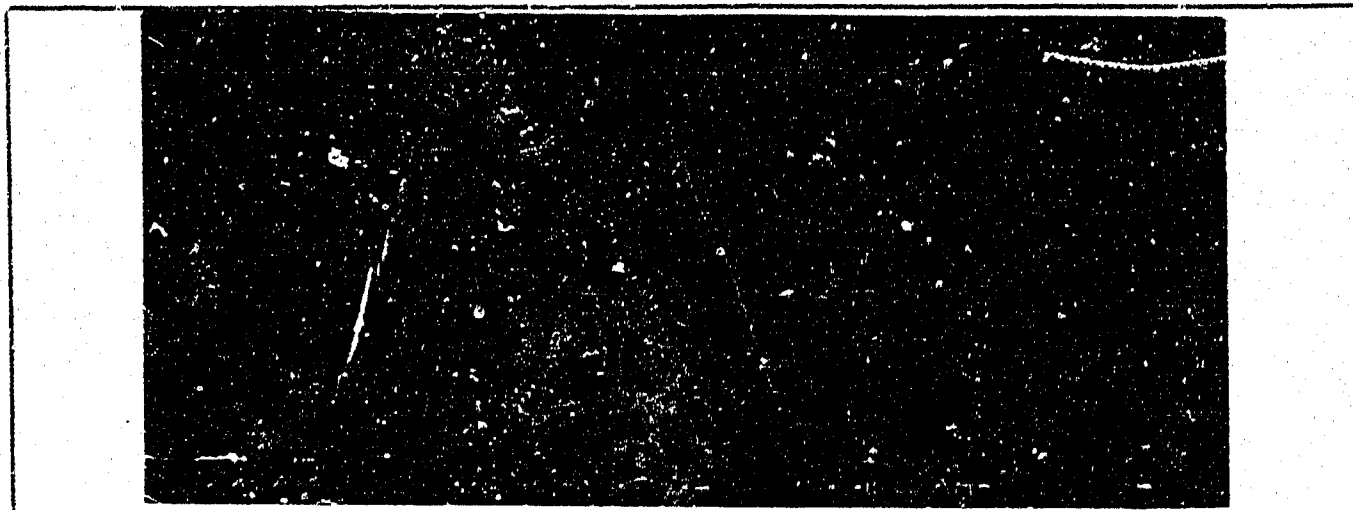
|                          | Field Estimate | Corrected Readings |       |
|--------------------------|----------------|--------------------|-------|
| Recorder Number          |                | 11567              | 14095 |
| Recorder Capacity (psig) |                | 3000               | 3000  |
| Recorder Depth           |                | 4384'              | 4442' |
| Recorder Position        |                |                    |       |
| Clock Capacity (hours)   |                | 12                 | 12    |
| Initial Hydrostatic      | 2208           | 2224               | 2253  |
| Initial Shut-in          | 1632           | 1645               | 1674  |
| Initial Flow             | 528            | 518                | 547   |
| Final Flow               | 624            | 603                | 631   |
| Final Shut-in            |                | 1637               | 1649  |
| Final Hydrostatic        | 2208           | 2215               | ---   |

# T.G. EASTLAND—testers ltd.

TEST No. One  
Date Feb. 12, 1968  
Ticket No. A267

WELL NAME H.B. CAMERON HILLS A5-60

RECORDER No. 11567 ELEMENT RANGE 5000 P.S.I. CHART SPEED 12 HRS. RECORDER DEPTH 4384'



TIME

PRESSURE

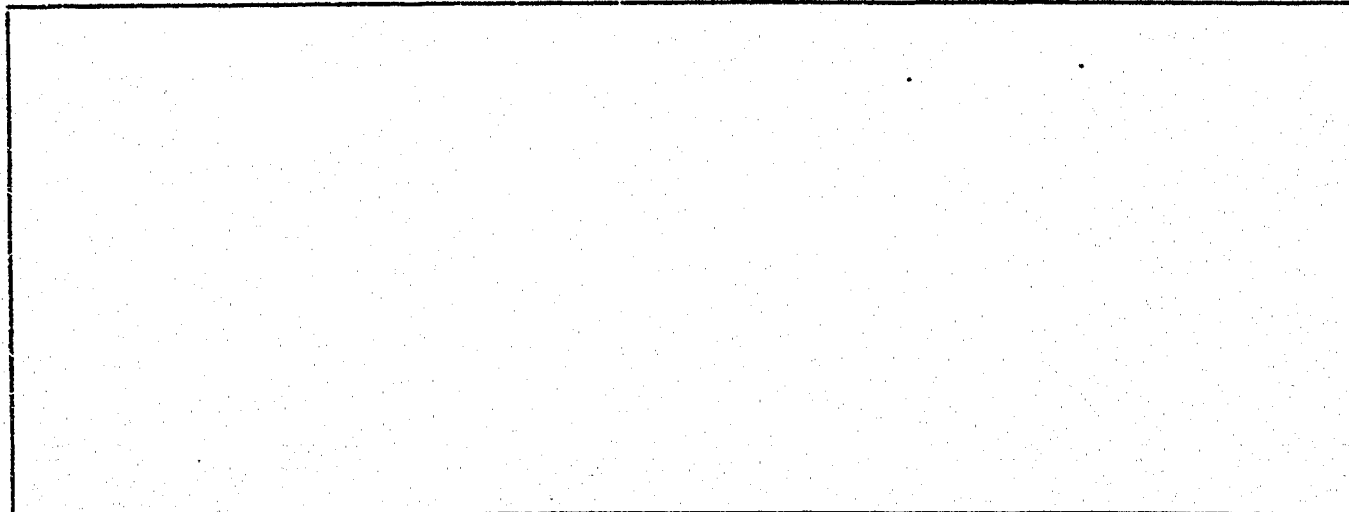
RECORDER No. 14095 ELEMENT RANGE 3000 P.S.I. CHART SPEED 12 HRS. RECORDER DEPTH 4442'



TIME

PRESSURE

RECORDER No. \_\_\_\_\_ ELEMENT RANGE \_\_\_\_\_ P.S.I. CHART SPEED \_\_\_\_\_ HRS. RECORDER DEPTH \_\_\_\_\_



TIME

PRESSURE



# T.G. EASTLAND—testers ltd.

P.O. BOX 8, NORTH EDMONTON, ALBERTA

TEST No. One  
Date Feb. 12, 1968  
Ticket No. A267

## DRILL STEM TEST PRESSURE REPORT

WELL NAME H.B. CAMERON HILLS A5-60 LSD. 60.04' 02.15"N 117.30'  
INTERVAL 4379' - 4443' FORMATION 27.44" W.L.  
GAUGE No. 11567 DEPTH OF ELEMENT 4384' BH. TEMP. °F  
CALIBRATION EQUATION P<sub>c</sub> 1536.68 - 4.20

|                     | Time   | T<br>Mins. | Pressure<br>psig |
|---------------------|--------|------------|------------------|
| Initial Hydrostatic |        |            | 2224             |
| Initial Shut-in     | 5:05am | 0          | 630              |
|                     | 5:11   | 6          | 1635             |
|                     | 5:17   | 12         | 1642             |
|                     | 5:23   | 18         | 1643             |
|                     | 5:29   | 24         | 1644             |
|                     | 5:35   | 30         | 1645             |
|                     | 5:41   | 36         | 1645             |
|                     | 5:47   | 42         | 1645             |
|                     | 5:50   | 45         | 1645             |
| Flow Pressure       |        | F1         | 518              |
|                     |        | F2         | 531              |
|                     |        | F3         | 617              |
|                     |        | F4         | 603              |
| Final Shut-in       | 6:50am | 0          | 603              |
|                     | 6:56   | 6          | 1612             |
|                     | 7:02   | 12         | 1626             |
|                     | 7:08   | 18         | 1630             |
|                     | 7:14   | 24         | 1635             |
|                     | 7:20   | 30         | 1637             |
| Final Hydrostatic   |        |            | 2215             |

# T.G. EASTLAND—testers ltd.

N. W. 100 E. NORTH EDMONTON, ALBERTA - PHONE 769 3321

## SERVICE REPORT

TEST No. Two  
Date Feb. 14, 1968  
Ticket No. A268

|                                                     |                          |               |                                 |                                     |        |
|-----------------------------------------------------|--------------------------|---------------|---------------------------------|-------------------------------------|--------|
| Well Name H. B. Cameron Hills A-06                  |                          |               |                                 | Loc 0.04' 02.15' N 117.30' 27.44' W |        |
| Formation Tested                                    |                          |               |                                 | TOOL ASSEMBLY                       |        |
| Interval 572'                                       | To 4602'                 | Tail Pipe 30' |                                 | Components                          | Length |
| First Flow 5 mins.                                  | Initial Shut-in 30 mins. |               |                                 | Double Fin Sub                      | .80    |
| Second Flow 60 mins.                                | Final Shut-in 30 mins.   |               |                                 | Test Tool                           | 8.50   |
| Maximum Formation Temp. 98 °F                       |                          |               |                                 | Equalizing Valve                    | 2.41   |
| Fluid Cushion none Amount                           |                          |               |                                 | Jars                                | 7.35   |
| Total Fluid Recovered 30'                           |                          |               |                                 | Safety Joint                        | 1.76   |
| Flow Rate Mcf/d Pitot Tube w/Water/Merc. ins.       |                          |               |                                 | Packer                              | 4.75   |
| Side Static Press. Gauge psig.                      |                          |               |                                 | Packer                              | 4.75   |
|                                                     |                          |               |                                 | Feet of Interval                    | 30.52  |
| Fluid Description 30' sulphurous water.             |                          |               |                                 |                                     |        |
| Remarks Good initial puff, gas to surface in 4 min. |                          |               |                                 |                                     |        |
| Was tool chased? yes 4'                             |                          |               |                                 |                                     |        |
| Did mud level drop? yes 8'                          |                          |               |                                 |                                     |        |
| When did mud level drop?                            |                          |               |                                 |                                     |        |
| Started in Hole 2:15am                              |                          |               | Out of Hole 9:15am              |                                     |        |
| Main Hole: Depth 4602'                              |                          |               | Size 7 7/8"                     |                                     |        |
| Rat Hole: Depth                                     |                          |               | Size                            |                                     |        |
| Casing: Depth 826'                                  |                          |               | Size 8 5/8" Weight 24#          |                                     |        |
| Drill Pipe Size 3 1/2" FH                           |                          |               |                                 |                                     |        |
| Drill Collar: Size 2 7/8" I.D. Length 672.53'       |                          |               |                                 |                                     |        |
| Type of Packer(s) Conv/                             |                          |               | No. of Packers Two              |                                     |        |
| Size of Packer Rubber 6 1/4"                        |                          |               | Witnesses                       |                                     |        |
| Bottom Choke Size 1"                                |                          |               | Co. Rep. C. Jasman              |                                     |        |
| Drilling Fluid Type gyp                             |                          |               | Tester Ron Fehler               |                                     |        |
| Viscosity 50 Weight 9.5 W.L. 12.5                   |                          |               | Toolpusher C. Jasman            |                                     |        |
|                                                     |                          |               | Drig. Cont. S & T Drig. Rig #1E |                                     |        |

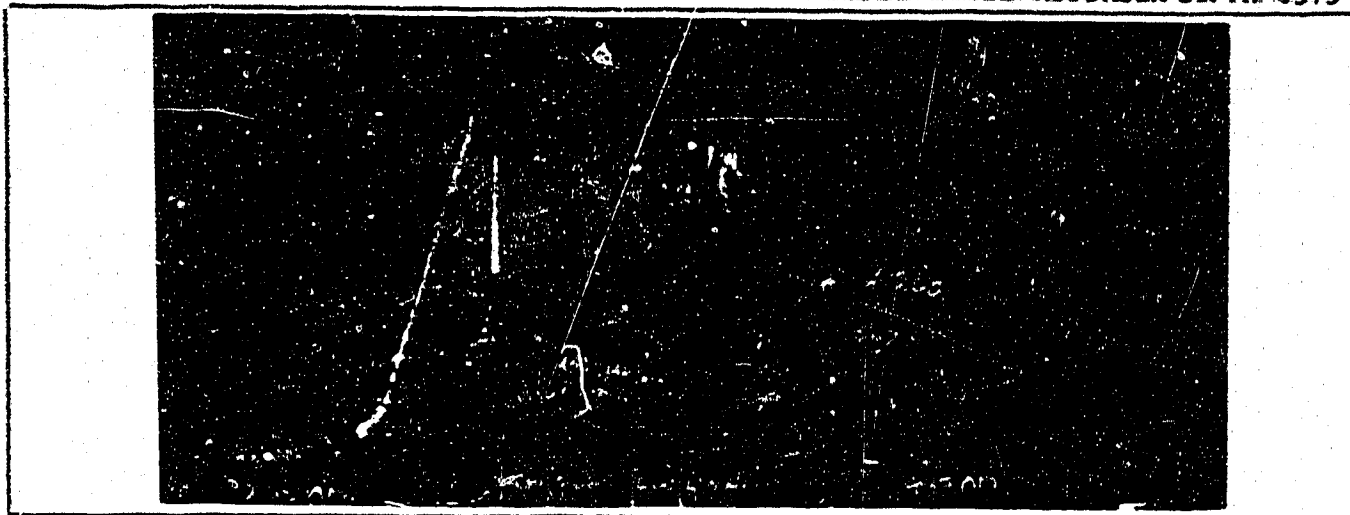
## PRESSURE DATA

|                          | Field Estimate | Corrected Readings |       |  |
|--------------------------|----------------|--------------------|-------|--|
| Recorder Number          |                | 11567              | 14095 |  |
| Recorder Capacity (psig) |                | 3000               | 3000  |  |
| Recorder Depth           |                | 4575'              | 4600' |  |
| Recorder Position        |                |                    |       |  |
| Clock Capacity (hours)   |                | 12                 | 12    |  |
| Initial Hydrostatic      | 2304           | 2316               | 2327  |  |
| Initial Shut-in          | 1229           | 1367               | 1379  |  |
| Initial Flow             | 432            | 443                | 454   |  |
| Final Flow               | 336            | 342                | 353   |  |
| Final Shut-in            | 1363           | 1231               | 1242  |  |
| Final Hydrostatic        | 2304           | 2310               | 2321  |  |

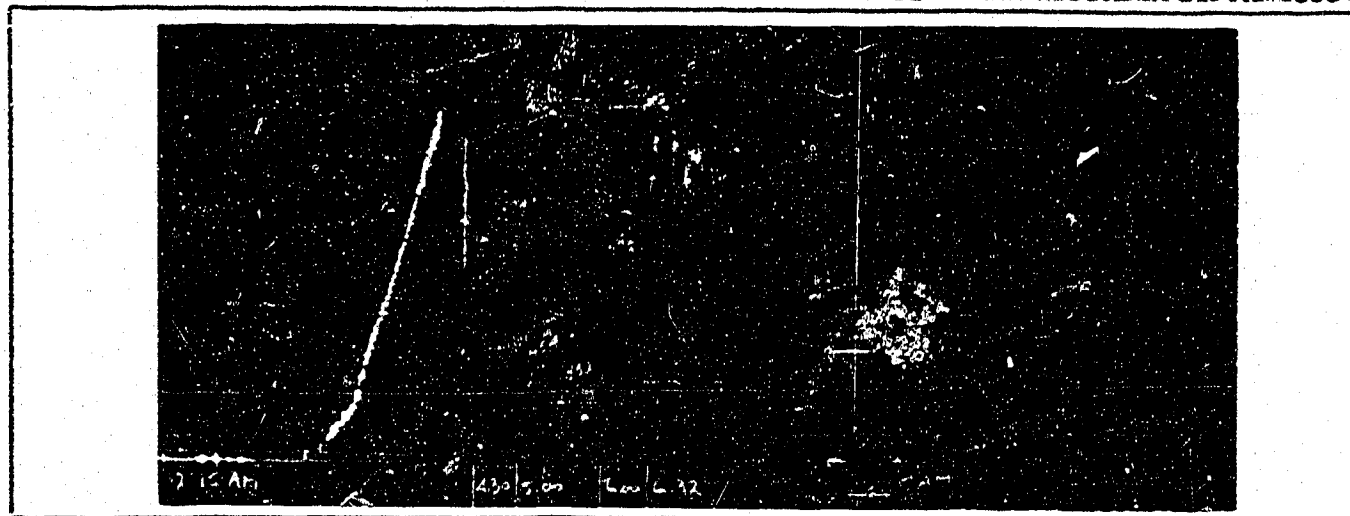
# T.G. EASTLAND—testers ltd.

TEST No. TWO  
Date Feb. 14, 1968  
Ticket No. A268

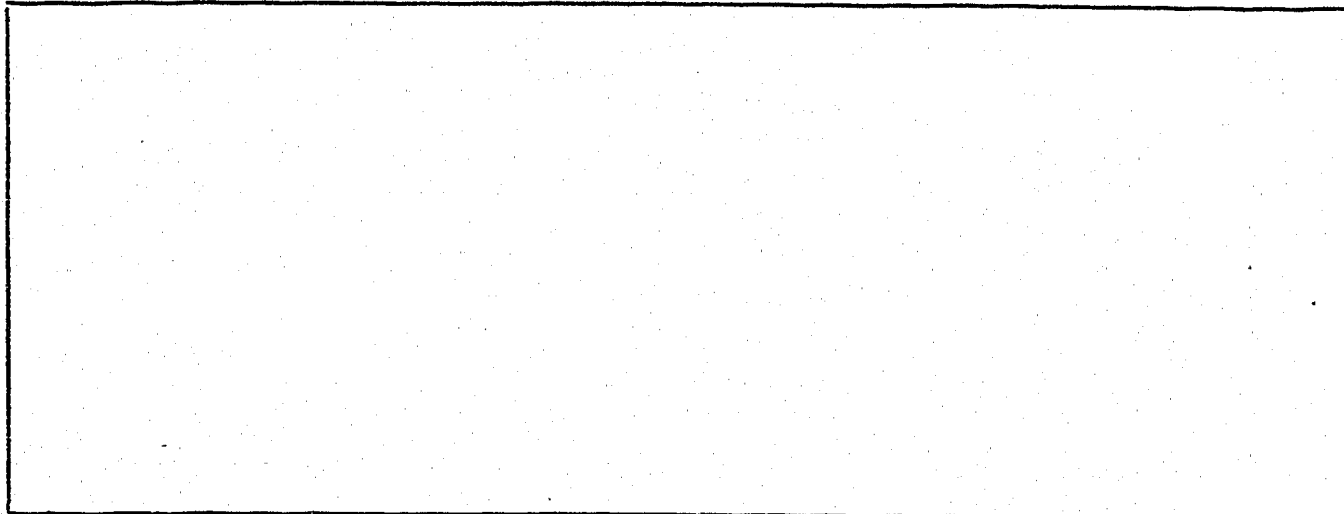
WELL NAME H.B. CAMERON HILLS A5-60  
RECORDER No. 11567 ELEMENT RANGE 3000 P.S.I. CHART SPEED 12 HRS. RECORDER DEPTH 4575'



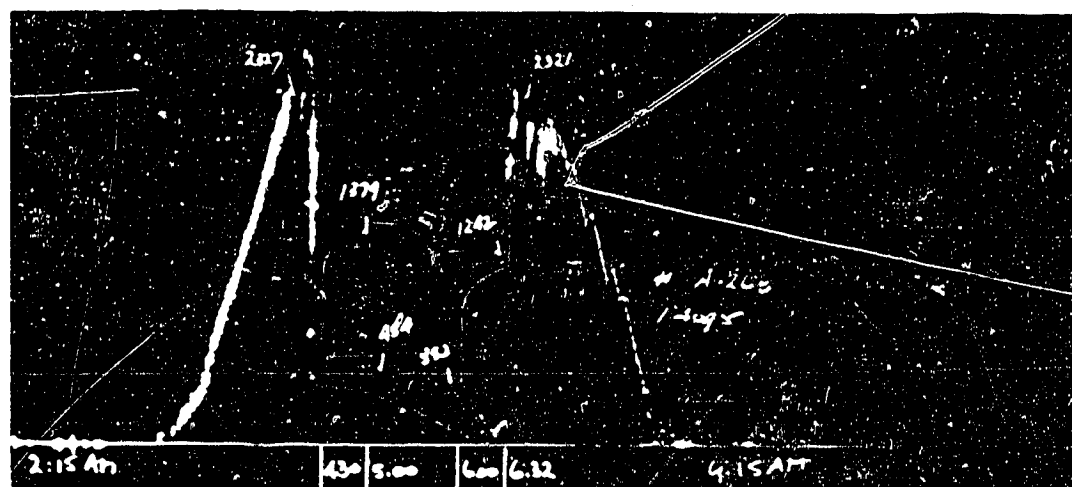
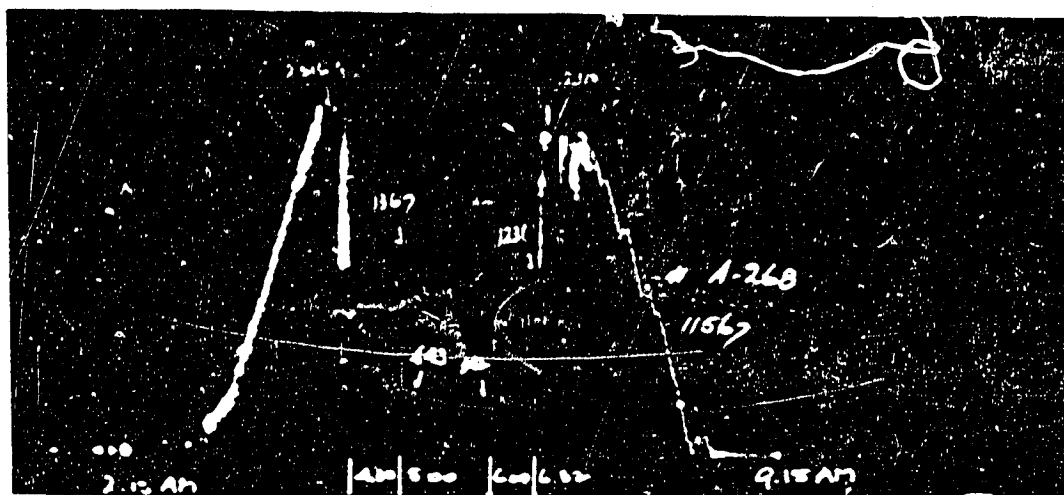
RECORDER No. 14095 ELEMENT RANGE 3000 P.S.I. CHART SPEED 12 HRS. RECORDER DEPTH 4600'



RECORDER No. ELEMENT RANGE P.S.I. CHART SPEED HRS. RECORDER DEPTH



# R. L. EASTLAND *testers Ltd.*





# T.G. EASTLAND—testers ltd.

R.R. No. 8, NORTH EDMONTON, ALBERTA

TEST No. Two

Date Feb. 14, 1968

Ticket No. A268

## DRILL STEM TEST PRESSURE REPORT

WELL NAME H.B. CAMERON HILLS A5-60 LSD 60.04' 02.15"N 117.30'  
INTERVAL 4573' - 4602' FORMATION 27.44"W B.H. TEMP. 7980  
GAUGE No. 11567 DEPTH OF ELEMENT 4575' CALIBRATION EQUATION P = 1536.68 - 4.20

|                     | Time   | T<br>Mins. | Pressure<br>psig |
|---------------------|--------|------------|------------------|
| Initial Hydrostatic |        |            | 2316             |
| Initial Shut-in     | 4:30am | 0          | 435              |
|                     | 4:36   | 6          | 1311             |
|                     | 4:42   | 12         | 1337             |
|                     | 4:48   | 18         | 1350             |
|                     | 4:54   | 24         | 1359             |
|                     | 5:00   | 30         | 1367             |
| Flow Pressure       |        | F1         | 443              |
|                     |        | F2         | 342              |
| Final Shut-in       | 6:00am | 0          | 342              |
|                     | 6:06   | 6          | 1045             |
|                     | 6:12   | 12         | 1116             |
|                     | 6:18   | 18         | 1161             |
|                     | 6:24   | 24         | 1193             |
|                     | 6:30   | 30         | 1222             |
|                     | 6:32   | 32         | 1231             |
| Final Hydrostatic   |        |            | 2310             |

# T.G. EASTLAND—testers ltd.

100 NO. 5 NORTH EDMONTON ALBERTA - PHONE 749 3321

## SERVICE REPORT

TEST No. Three  
Date Feb. 18, 1968  
Ticket No. A269

|                                                                                    |                          |               |                                 |  |                                       |        |
|------------------------------------------------------------------------------------|--------------------------|---------------|---------------------------------|--|---------------------------------------|--------|
| Well Name H.B. Cameron Hills A-05                                                  |                          |               |                                 |  | Loc. 60.04' 02.15" N 117.30' 27.44" W |        |
| Formation Tested                                                                   |                          |               |                                 |  | TOOL ASSEMBLY                         |        |
| Interval 4845'                                                                     | To 4875'                 | Tail Pipe 30' |                                 |  | Component                             | Length |
| First Flow 5 mins.                                                                 | Initial Shut-in 30 mins. |               |                                 |  | Test Tool                             | 2.76   |
| Second Flow 60 mins.                                                               | Final Shut-in 30 mins.   |               |                                 |  | Equalizing Valve                      | 2.88   |
| Maximum Formation Temp. 100 °F                                                     |                          |               |                                 |  | Jars                                  | 7.35   |
| Fluid Cushion none Amount                                                          |                          |               |                                 |  | Safety Joint                          | 1.88   |
| Total Fluid Recovered 15'                                                          |                          |               |                                 |  | Packer                                | 4.75   |
| Flow Rate Mcf/d Pitot Tube w/Water/Merc. ins.                                      |                          |               |                                 |  | Packer                                | 4.75   |
| Side Static Press. Gauge psig.                                                     |                          |               |                                 |  | Feet of Interval                      | 30.50  |
| Fluid Description 15' sulphurous drilling mud.                                     |                          |               |                                 |  |                                       |        |
| Remarks Gas to surface in 4 min. Good gas blow through out test. Approx. 1 - mmcf. |                          |               |                                 |  |                                       |        |
| Was tool chased? yes 2'                                                            |                          |               |                                 |  |                                       |        |
| Did mud level drop? yes 4'                                                         |                          |               |                                 |  |                                       |        |
| When did mud level drop?                                                           |                          |               |                                 |  |                                       |        |
| Started in Hole 3:00am                                                             |                          |               | Out of Hole                     |  |                                       |        |
| Main Hole: Depth 4875'                                                             |                          |               | Size 7 7/8"                     |  |                                       |        |
| Rat Hole: Depth                                                                    |                          |               | Size                            |  |                                       |        |
| Casing: Depth 826'                                                                 |                          |               | Size 8 5/8"                     |  | Weight 24"                            |        |
| Drill Pipe Size 3 1/2"                                                             |                          |               |                                 |  |                                       |        |
| Drill Collar: Size 2 7/8"                                                          |                          |               | I.D. Length 672'                |  |                                       |        |
| Type of Packer(s) Conv.                                                            |                          |               | No. of Packers Two              |  | Witnesses                             |        |
| Size of Packer Rubber 6 3/4"                                                       |                          |               |                                 |  | Co. Rep. Cliff Jasman                 |        |
| Bottom Choke Size 1 1/2"                                                           |                          |               | Surface Choke Size              |  | Tester Ron Fehler                     |        |
| Drilling Fluid Type gyp                                                            |                          |               |                                 |  | Toolpusher W. Haines                  |        |
| Viscosity 58                                                                       |                          |               | Weight 9.9                      |  | W.L. 10.6                             |        |
|                                                                                    |                          |               | Drig. Cont. S & T Drig. Rig #1E |  |                                       |        |

## PRESSURE DATA

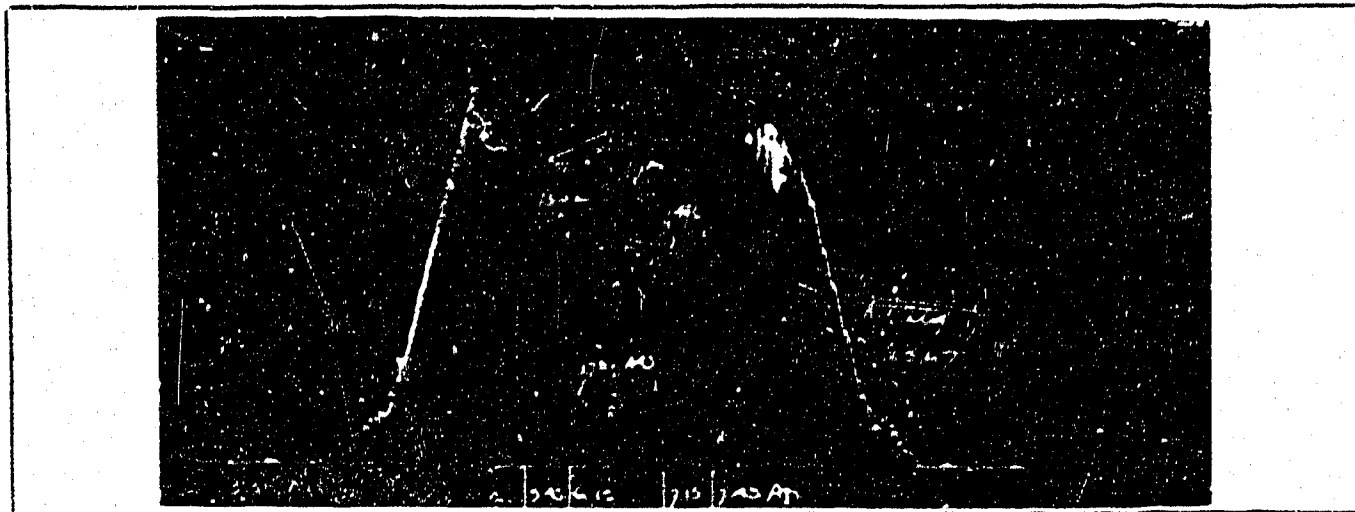
|                          | Field Estimate | Corrected Readings |       |  |
|--------------------------|----------------|--------------------|-------|--|
| Recorder Number          |                | 11567              | 14095 |  |
| Recorder Capacity (psig) |                | 3000               | 3000  |  |
| Recorder Depth           |                | 4850'              | 4872' |  |
| Recorder Position        |                |                    |       |  |
| Clock Capacity (hours)   |                | 12                 | 12    |  |
| Initial Hydrostatic      | 2592           | 2561               | 2572  |  |
| Initial Shut-in          | 1536           | 1502               | 1512  |  |
| Initial Flow             | 384            | 378                | 389   |  |
| Final Flow               | 456            | 443                | 454   |  |
| Final Shut-in            | 1532           | 1496               | 1506  |  |
| Final Hydrostatic        | 2592           | 2531               | 2543  |  |

# T.G. EASTLAND—testers ltd.

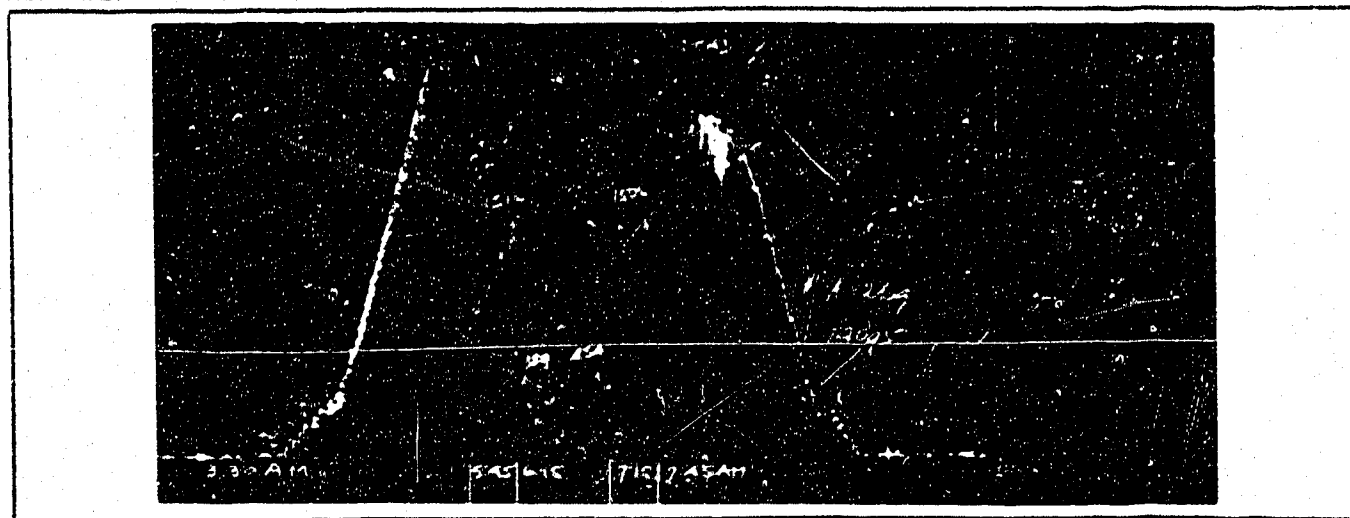
TEST No. Three  
Date Feb. 16, 1968  
Ticket No. A269

WELL NAME H.B. CAMERON HILLS A5-60

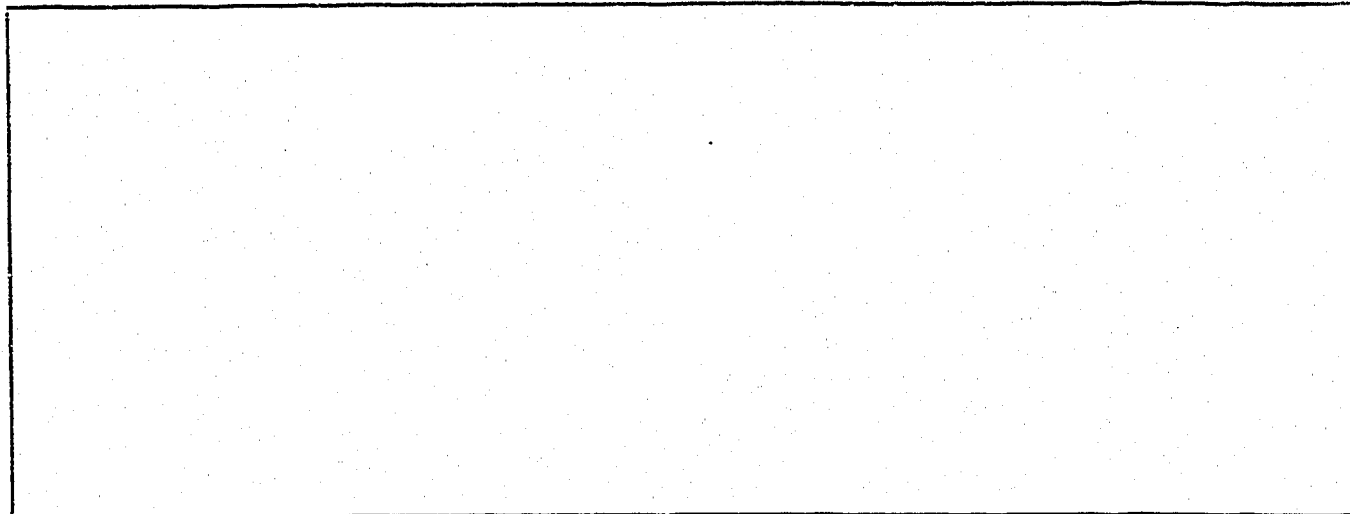
RECORDER No. 11507 ELEMENT RANGE 3000 P.S.I. CHART SPEED 12 HRS. RECORDER DEPTH 4850'



RECORDER No. 14095 ELEMENT RANGE 3000 P.S.I. CHART SPEED 12 HRS. RECORDER DEPTH 4872'

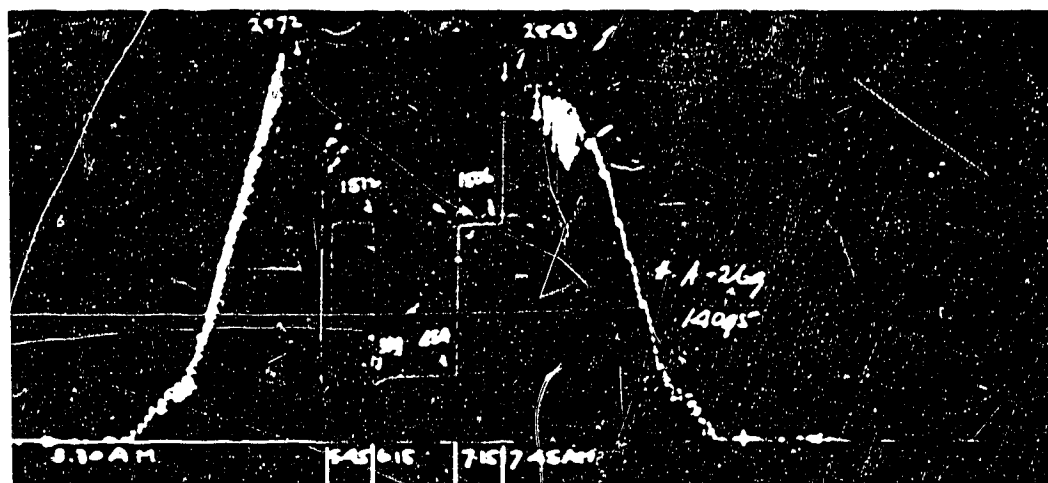
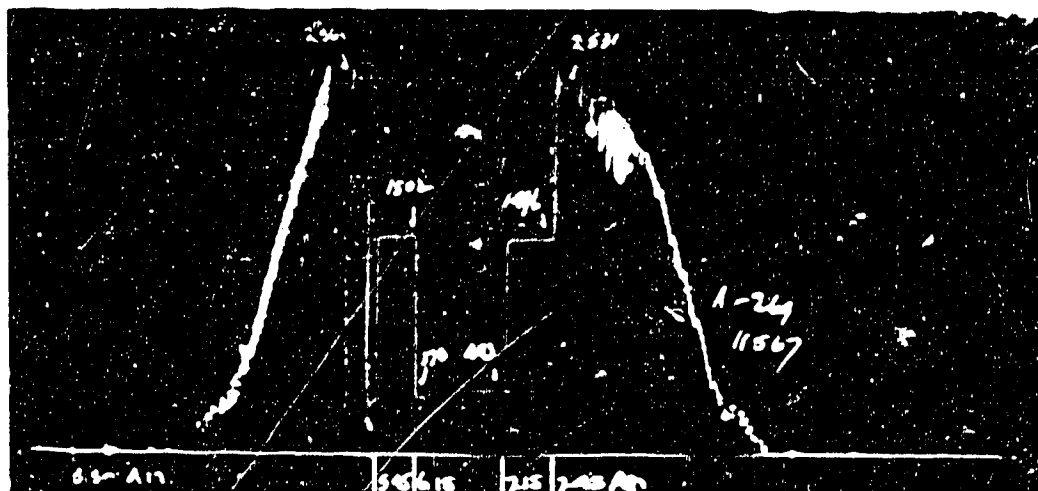


RECORDER No. ELEMENT RANGE P.S.I. CHART SPEED HRS. RECORDER DEPTH



TIME

# T.G. EASTLAND testers Ltd.



# T.G. EASTLAND—testers ltd.

R.R. No. 6, NORTH EDMONTON, ALBERTA

TEST No. Three

Date Feb. 18, 1968

Ticket No. A269

## DRILL STEM TEST PRESSURE REPORT

WELL NAME H. B. CAMERON HILLS A-5-60 LSD. 60.04' 02.15" N 117.30' 27.44" W

INTERVAL 4875 FORMATION B.H. TEMP. °F 100

GAUGE No. 11507 DEPTH OF ELEMENT 4850' CALIBRATION EQUATION  $P = 1536.68 - 4.20$

|                     | Time   | T<br>Mins. | Pressure<br>psig |
|---------------------|--------|------------|------------------|
| Initial Hydrostatic |        |            | 2561             |
| Initial Shut-in     | 5:45am | 0          | 360              |
|                     | 5:51   | 6          | 1496             |
|                     | 5:57   | 12         | 1500             |
|                     | 6:03   | 18         | 1502             |
|                     | 6:09   | 24         | 1502             |
|                     | 6:15   | 30         | 1502             |
| Flow Pressure       |        | F1         | 378              |
|                     |        | F2         | 443              |
| Final Shut-in       | 7:15am | 0          | 443              |
|                     | 7:21   | 6          | 1479             |
|                     | 7:27   | 12         | 1488             |
|                     | 7:33   | 18         | 1491             |
|                     | 7:39   | 24         | 1494             |
|                     | 7:45   | 30         | 1496             |
| Final Hydrostatic   |        |            | 2531             |

# T.G. EASTLAND—testers ltd.

2111 50th St. NORTH EDMONTON ALBERTA PHONE 749 3411

## SERVICE REPORT

TEST No. FOUR

Date Feb. 19, 1968

Ticket No. A270

|                                        |                                |                                            |                                            |
|----------------------------------------|--------------------------------|--------------------------------------------|--------------------------------------------|
| Well Name <u>H.B. Cameron Hills A.</u> |                                | Loc <u>0.04' 02.15" N 117.30' 27.44" W</u> |                                            |
| Formation Tested                       |                                | TOOL ASSEMBLY                              |                                            |
| Interval <u>4873'</u>                  | To <u>4903'</u>                | Tail Pipe <u>35'</u>                       |                                            |
| First Flow                             | mins.                          | Initial Shut-in                            | mins.                                      |
| Second Flow                            | mins.                          | Final Shut-in                              | mins.                                      |
| Maximum Formation Temp.                |                                | °F                                         |                                            |
| Fluid Cushion                          |                                | Amount                                     |                                            |
| Total Fluid Recovered                  |                                |                                            |                                            |
| Flow Rate                              | Mcf/d Pitot Tube w/Water/Merc. | ins.                                       |                                            |
| Side Static Press. Gauge               |                                | psig.                                      |                                            |
| Fluid Description                      |                                |                                            |                                            |
| Remarks <u>Misrun. Tight hole.</u>     |                                |                                            |                                            |
| Was tool chased?                       |                                |                                            |                                            |
| Did mud level drop?                    |                                |                                            |                                            |
| When did mud level drop?               |                                |                                            |                                            |
| Started in Hole <u>4:30</u>            |                                | Out of Hole                                |                                            |
| Main Hole: Depth <u>4875'</u>          | Size <u>7 7/8"</u>             |                                            |                                            |
| Rat Hole: Depth <u>4903'</u>           | Size <u>6 3/16"</u>            |                                            |                                            |
| Casing: Depth <u>826'</u>              | Size <u>8 5/8"</u>             | Weight <u>24#</u>                          |                                            |
| Drill Pipe Size <u>3 1/2"</u>          |                                |                                            |                                            |
| Drill Collar: Size <u>2 7/8"</u>       |                                | I.D. Length                                |                                            |
| Type of Packer(s) <u>Conv.</u>         | No. of Packers <u>Two</u>      | Witnesses                                  |                                            |
| Size of Packer Rubber <u>6 1/2"</u>    | Co. Rep. <u>Cliff Jasman</u>   |                                            |                                            |
| Bottom Choke Size                      | Surface Choke Size             | Tester <u>Ron Fehler</u>                   |                                            |
| Drilling Fluid Type <u>372</u>         | Toolpusher <u>W. Haines</u>    |                                            |                                            |
| Viscosity <u>85</u>                    | Weight <u>10.</u>              | W.L. <u>7.6</u>                            | Drig. Cont. <u>S &amp; T Drig. Rig #1E</u> |

## PRESSURE DATA

|                          | Field Estimate | Corrected Readings |  |  |
|--------------------------|----------------|--------------------|--|--|
| Recorder Number          |                |                    |  |  |
| Recorder Capacity (psig) |                |                    |  |  |
| Recorder Depth           |                |                    |  |  |
| Recorder Position        |                |                    |  |  |
| Clock Capacity (hours)   |                |                    |  |  |
| Initial Hydrostatic      |                |                    |  |  |
| Initial Shut-in          |                |                    |  |  |
| Initial Flow             |                |                    |  |  |
| Final Flow               |                |                    |  |  |
| Final Shut-in            |                |                    |  |  |
| Final Hydrostatic        |                |                    |  |  |

# T.G. EASTLAND—testers ltd.

TEST No. Four  
Date Feb. 19, 1968  
Ticket No. A270

WELL NAME H. B. CAMFRON HILLS A5-00

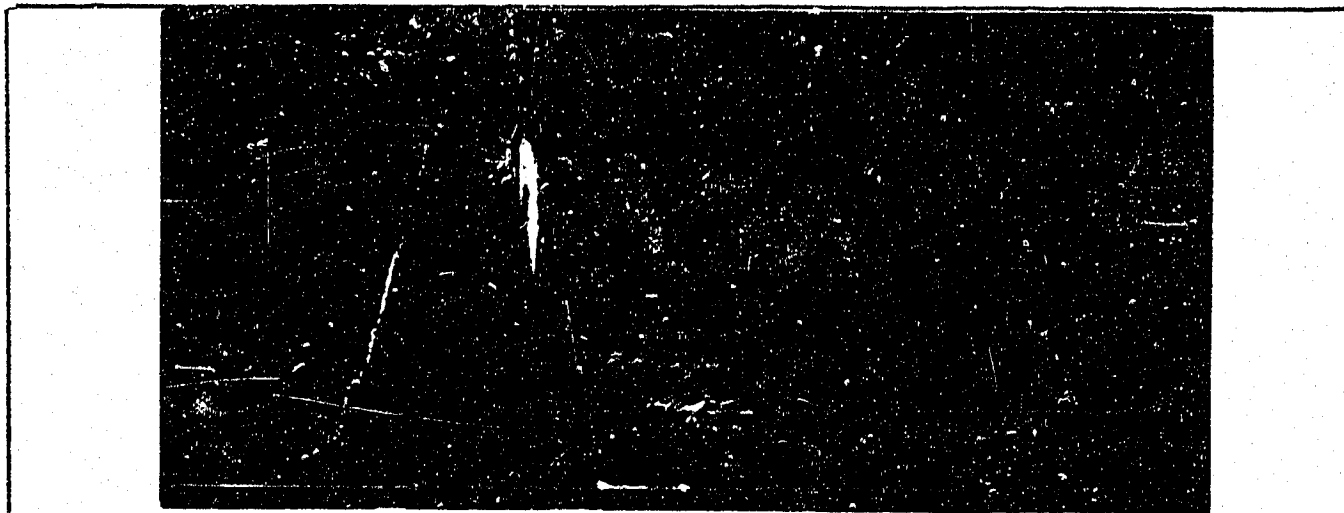
RECORDER No. 11527 ELEMENT RANGE 3000 P.S.I. CHART SPEED 12 HRS. RECORDER DEPTH 4875'



TIME

PRESSURE

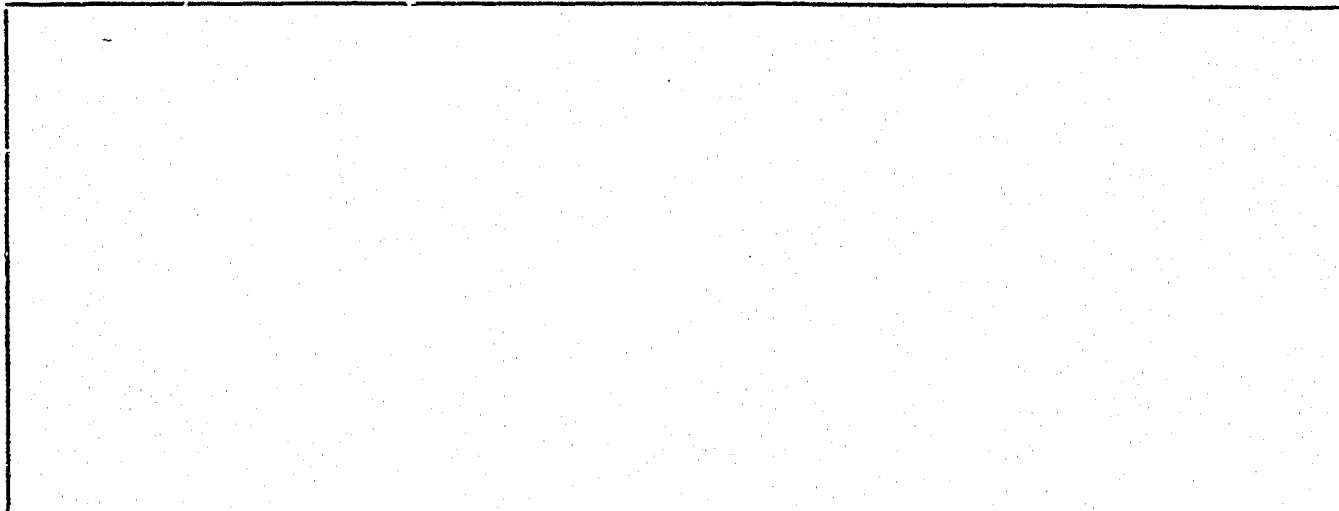
RECORDER No. 14095 ELEMENT RANGE 3000 P.S.I. CHART SPEED 12 HRS. RECORDER DEPTH 4902'



TIME

PRESSURE

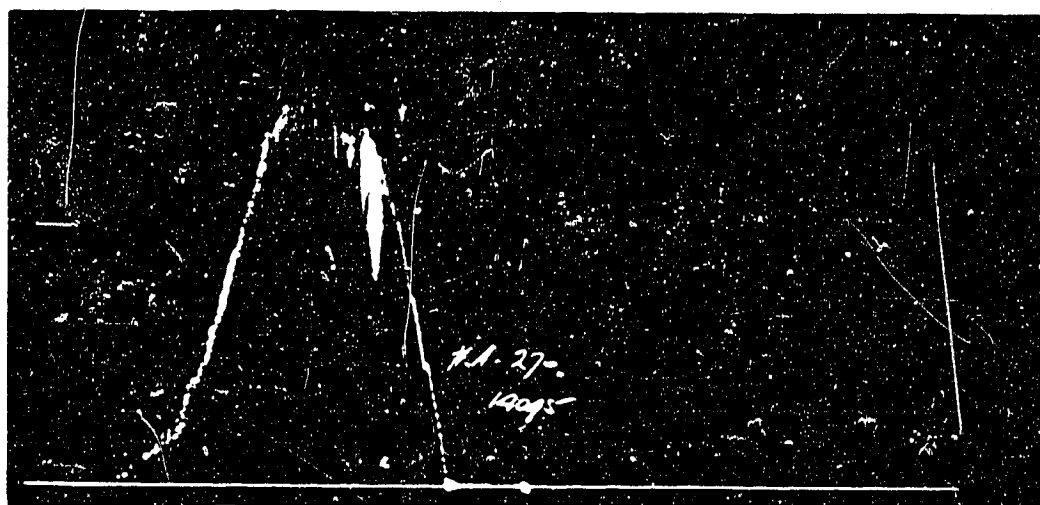
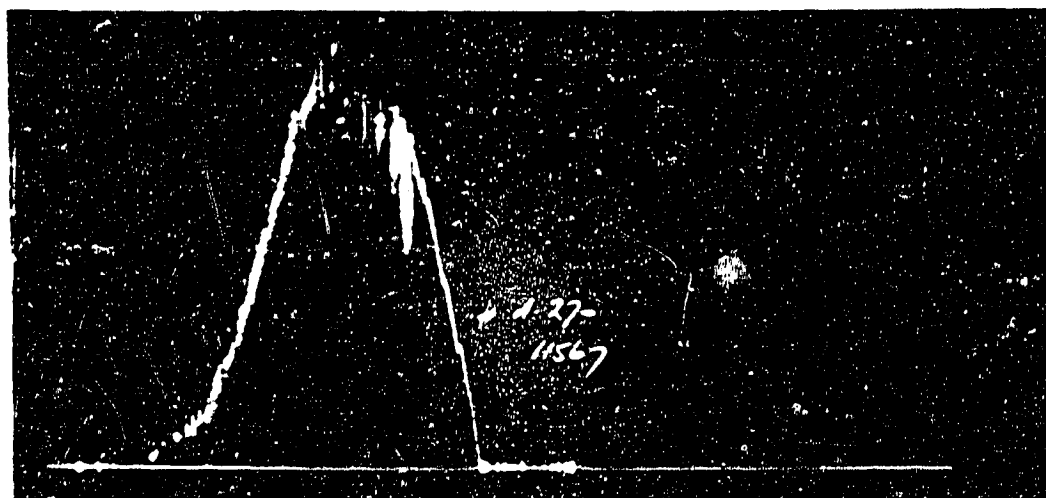
RECORDER No. ELEMENT RANGE P.S.I. CHART SPEED HRS. RECORDER DEPTH



TIME

PRESSURE

# I.C. EASTLAND *testers ltd.*





# T.G. EASTLAND—testers ltd.

4400 6 NORTH EDMONTON ALBERTA PHONE 799 3321

## SERVICE REPORT

TEST No. Five  
Date Feb. 20, 1968  
Ticket No. A271

|                                                                             |                          |                    |  |                                     |        |
|-----------------------------------------------------------------------------|--------------------------|--------------------|--|-------------------------------------|--------|
| Well Name H. D. Cameron Hills A-05                                          |                          |                    |  | Loc. 69.04' 02.15"N 117.30' 27.54"W |        |
| Formation Tested                                                            |                          |                    |  | TOOL ASSEMBLY                       |        |
| Interval 7570'                                                              | To 4700'                 | Tail Pipe 55'      |  | Components                          | Length |
| First Flow 5 mins.                                                          | Initial Shut-in 40 mins. |                    |  |                                     |        |
| Second Flow 60 mins.                                                        | Final Shut-in 50 mins.   |                    |  |                                     |        |
| Maximum Formation Temp 101 °F                                               |                          |                    |  |                                     |        |
| Fluid Cushion none Amount                                                   |                          |                    |  |                                     |        |
| Total Fluid Recovered 1.0                                                   |                          |                    |  |                                     |        |
| Flow Rate Mc/d Pitot Tube w/Water/Merc.                                     |                          | ins.               |  |                                     |        |
| Side Static Press. Gauge                                                    |                          | psig.              |  |                                     |        |
| Fluid Description 110' sulphurous gas cut mud.                              |                          |                    |  |                                     |        |
| Remarks Good blow, gas to surface in 3 min.<br>1 1/2 min. through out test. |                          |                    |  |                                     |        |
| Was tool chased?                                                            |                          |                    |  |                                     |        |
| Did mud level drop?                                                         |                          |                    |  |                                     |        |
| When did mud level drop?                                                    |                          |                    |  |                                     |        |
| Started in Hole 9:50pm.                                                     |                          | Out of Hole 12:MN  |  |                                     |        |
| Main Hole: Depth 4909'                                                      |                          | Size 7 7/8"        |  |                                     |        |
| Rat Hole: Depth                                                             |                          | Size               |  |                                     |        |
| Casing: Depth 826'                                                          |                          | Size 8 5/8"        |  | Weight 24#                          |        |
| Drill Pipe Size 5 1/2"                                                      |                          |                    |  |                                     |        |
| Drill Collar: Size 2 7/8"                                                   |                          | I.D. Length 672'   |  |                                     |        |
| Type of Packer(s) Conv.                                                     |                          | No. of Packers Two |  | Witnesses                           |        |
| Size of Packer Rubber 6 1/2"                                                |                          |                    |  | Co. Rep. Cliff Jasman               |        |
| Bottom Choke Size 1"                                                        |                          | Surface Choke Size |  | Tester Ron Fehler                   |        |
| Drilling Fluid Type GYP                                                     |                          |                    |  | Toolpusher W. Haines                |        |
| Viscosity 81                                                                |                          | Weight 9.9         |  | W.L. 7.2                            |        |
|                                                                             |                          |                    |  | Drlg. Cont. S & T Drlg. Rig #1F     |        |

## PRESSURE DATA

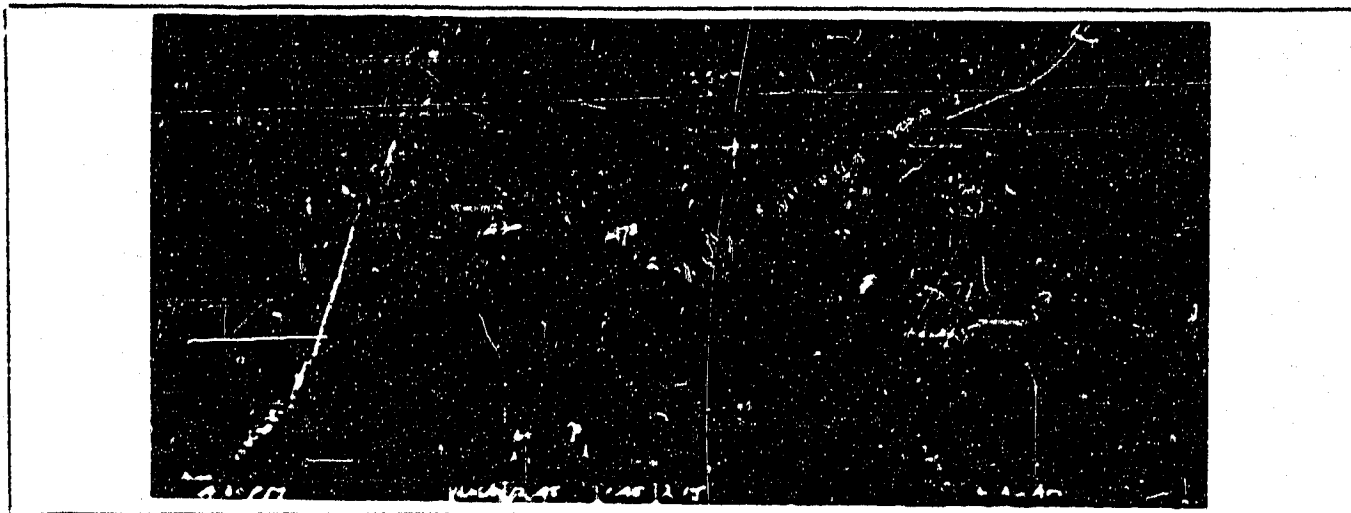
|                          | Field Estimate | Corrected Readings |       |  |
|--------------------------|----------------|--------------------|-------|--|
| Recorder Number          |                | 14095              | 11567 |  |
| Recorder Capacity (psig) |                | 3000               | 3000  |  |
| Recorder Depth           |                | 4878'              | 4908' |  |
| Recorder Position        |                |                    |       |  |
| Clock Capacity (hours)   |                | 12                 | 12    |  |
| Initial Hydrostatic      | 2496           | 2555               | 2571  |  |
| Initial Shut-in          | 1480           | 1430               | 1445  |  |
| Initial Flow             | 96             | 61                 | 76    |  |
| Final Flow               | 96             | 71                 | 85    |  |
| Final Shut-in            | 1480           | 1478               | 1493  |  |
| Final Hydrostatic        | 2496           | 2506               | 2521  |  |

# T.G. EASTLAND—testers ltd.

TEST No. Five  
 Date Feb. 20, 1966  
 Ticket No. A27

WELL NAME MR. CAMERON WELLS A-1-66

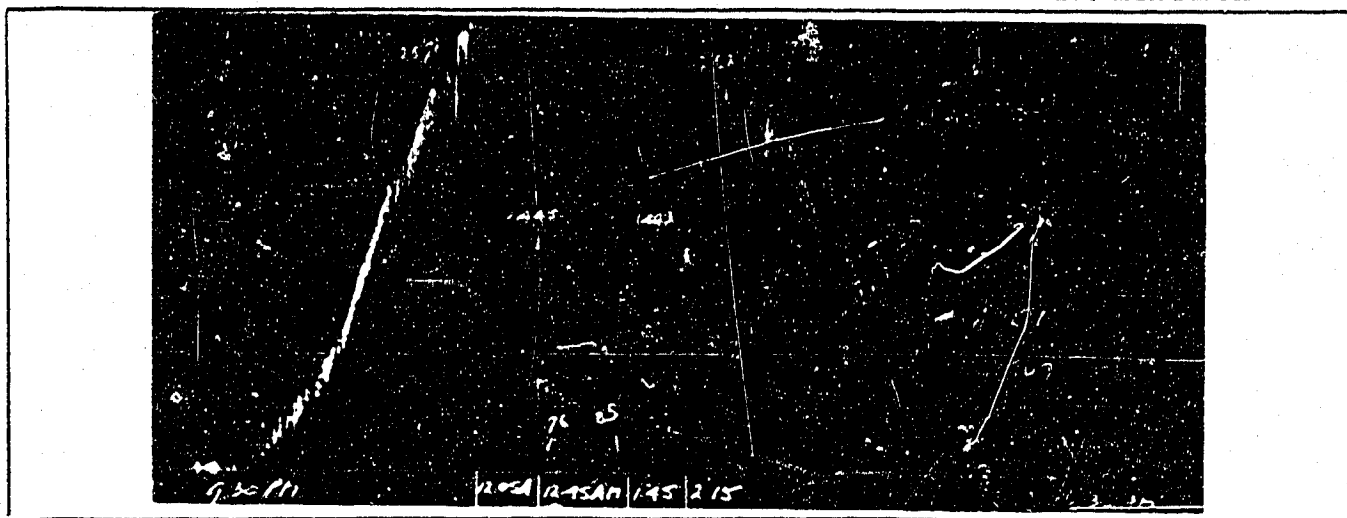
RECORDER No. 11095 ELEMENT RANGE 3000 P.S.I. CHART SPEED 12 HRS. RECORDER DEPTH 4670



TIME

PRESSURE

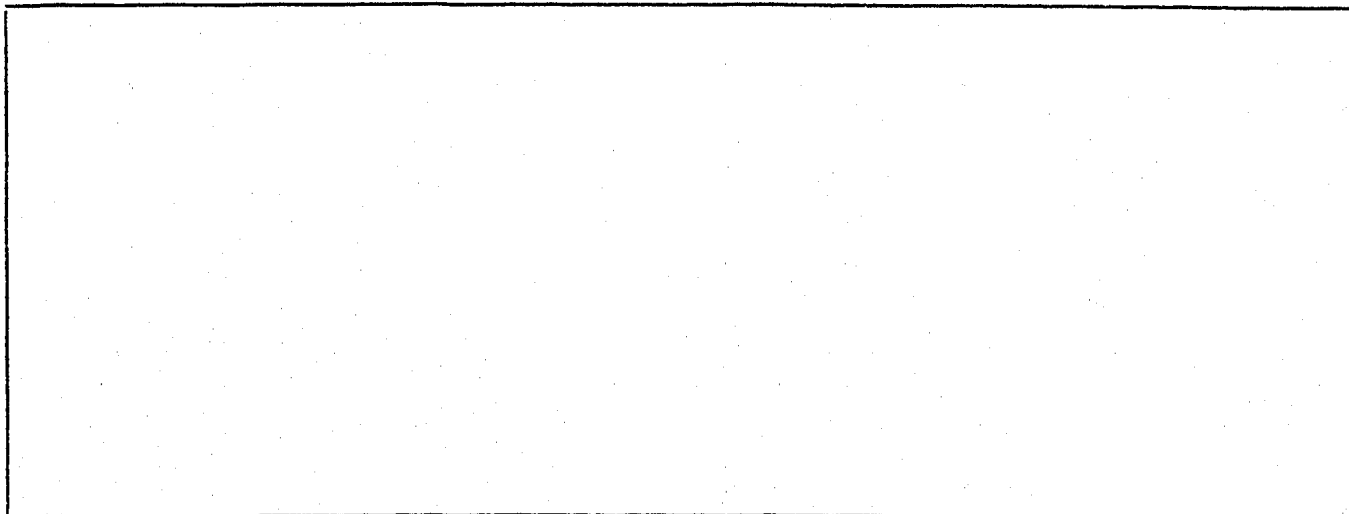
RECORDER No. 11507 ELEMENT RANGE 3000 P.S.I. CHART SPEED 12 HRS. RECORDER DEPTH 4908



TIME

PRESSURE

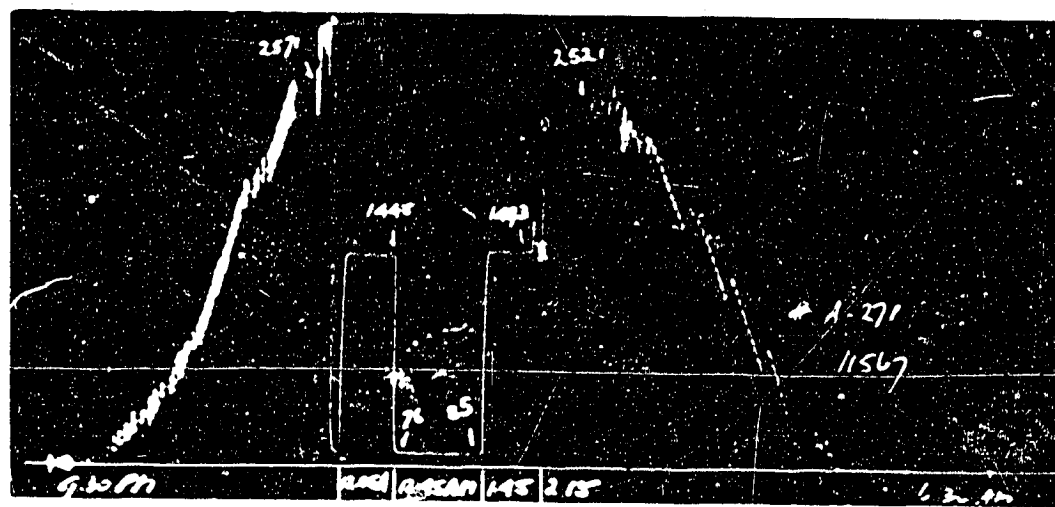
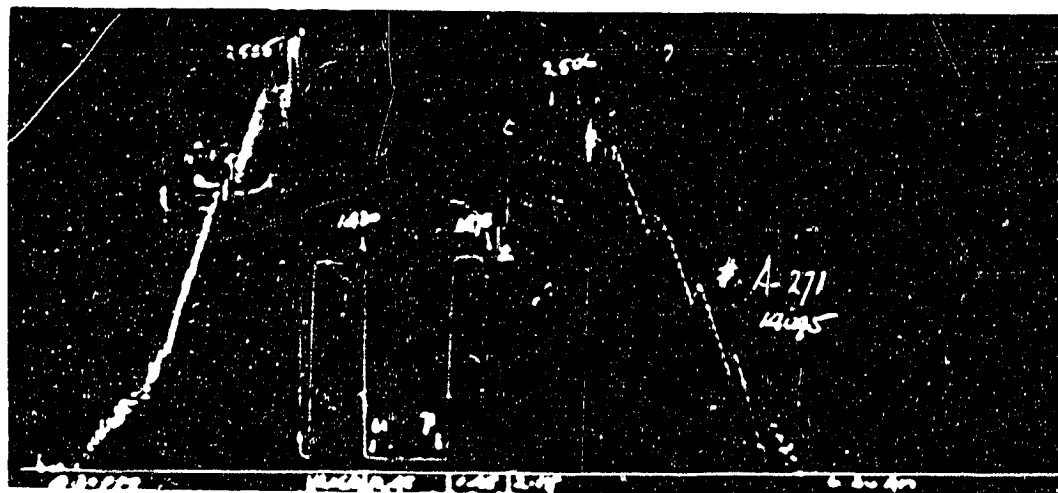
RECORDER No. .... ELEMENT RANGE ..... P.S.I. CHART SPEED ..... HRS. RECORDER DEPTH .....



TIME

PRESSURE

# T.G. EASTLAND *testers ltd.*



# T.G. EASTLAND—testers Ltd.

R.R. No. 8, NORTH EDMONTON, ALBERTA

TEST No. Five  
Date Feb. 20, 1968  
Ticket No. A271

## DRILL STEM TEST PRESSURE REPORT

WELL NAME H.B. CAMERON HILLS A5-60 L.S.D. 60.04' 02.15"N 117.30' 27.44"  
INTERVAL 4876' - 4909' FORMATION \_\_\_\_\_ B.H. TEMP. °F 101  
CAUGE No. 11567 DEPTH OF ELEMENT 4906' CALIBRATION EQUATION Pc 1536.68 - 4.20

|                     | Time    | T<br>Mins. | Pressure<br>psig |
|---------------------|---------|------------|------------------|
| Initial Hydrostatic |         |            | 2571             |
| Initial Shut-in     | 12:05am | 0          | 88               |
|                     | 12:11   | 6          | 1445             |
|                     | 12:15   | 10         | 1460             |
|                     | 12:17   | 12         | 1457             |
|                     | 12:23   | 18         | 1453             |
|                     | 12:29   | 24         | 1449             |
|                     | 12:35   | 30         | 1449             |
|                     | 12:41   | 36         | 1449             |
|                     | 12:45   | 40         | 1445             |
| Flow Pressure       |         | F1         | 76               |
|                     |         | F2         | 85               |
| Final Shut-in       | 1:45am  | 0          | 85               |
|                     | 1:51    | 6          | 1474             |
|                     | 1:57    | 12         | 1491             |
|                     | 2:03    | 18         | 1493             |
|                     | 2:09    | 24         | 1493             |
|                     | 2:15    | 30         | 1493             |
| Final Hydrostatic   |         |            | 2521             |

## CHEMICAL &amp; GEOLOGICAL LABORATORIES LTD.

Edmonton

Fort St. John

Calgary

GAS ANALYSIS REPORT: Lab. No. C68-6085 Received: Feb. 23, 1968 Reported: Feb. 27, 1968Well: H.B. Cameron Hills A-05 Operator: Hudson's Bay Oil and Gas Company  
LimitedField or Area: \_\_\_\_\_ Location: 64° 04' 02.15" Lat. Elev.: K.B. 2556' Grd. 2543'  
117° 30' 27.44" Long.Zone and Formation: Keg River Sample Interval: 4845' - 4875'

Well production at sampling time: Oil \_\_\_\_\_ bpd; Gas \_\_\_\_\_ MCFD; Water \_\_\_\_\_ bpd.

Sampled from: Surface Sampled by: T.G. Eastland Testers Date: Feb. 18,  
Ltd. 1968

Pressure: (a) at point of sampling \_\_\_\_\_ psig (b) Gas Bomb pressure \_\_\_\_\_ psig

Temperature: (a) at point of sampling \_\_\_\_\_ °F (b) Separator \_\_\_\_\_ °F

Pressures: Reservoir \_\_\_\_\_ Tubing \_\_\_\_\_ Casing \_\_\_\_\_ Separator \_\_\_\_\_

OTHER PERTINENT DATA: D.S.T. #3 GTS in 4 minutes at 1 MCFD. (Side static freezing---  
off, may be higher). Recovery: 15% gas cut sulfurous mud.

(Signed)

| COMPOSITION      | % by Volume | G.P.M. in Imp. Gal. @ 60°F. & 14.65 PSIA | G.P.M. (Calculated)                                                | SPECIFIC GRAVITY                                               |
|------------------|-------------|------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------------|
| Helium           | .11         |                                          | pentanes + .152                                                    | Calculated .649                                                |
| Hydrogen sulfide | .00         |                                          | at 12 lbs. _____                                                   | by Weight .653                                                 |
| Carbon dioxide   | 1.21        |                                          | at 15 lbs. .152                                                    | CRITICALS (Calculated)                                         |
| Oxygen           | .00         |                                          | at 22 lbs. .176                                                    | Pc 665.3                                                       |
| Nitrogen         | 5.42        |                                          | at 26 lbs. .193                                                    | Tc 359.9                                                       |
| Methane          | 85.99       |                                          | VAPOR PRESSURE (Calc.) of pentanes + 14.90                         |                                                                |
| Ethane           | 3.78        |                                          | H <sub>2</sub> S Grains per 100 cu. ft. @ 60°F. & 14.65 p.s.i.a. 0 |                                                                |
| Propane          | 1.98        | .452                                     | GROSS B.T.U. (Calc.) @ 60°F. & 14.65 p.s.i.a. 1036.1               |                                                                |
| Isobutane        | .35         | .095                                     | DEW POINT (Calc.) p.s.i. 950 1050 1200                             |                                                                |
| N-butane         | .68         | .178                                     | FAH 18 14 9                                                        |                                                                |
| Isopentane       | .19         | .058                                     | REMARKS                                                            | When received for analysis, the pressure was 61 psig. at 74°F. |
| N-pentane        | .19         | .057                                     |                                                                    |                                                                |
| Hexanes          | .07         | .024                                     |                                                                    |                                                                |
| Heptanes +       | .03         | .013                                     |                                                                    |                                                                |
| TOTAL            | 100.00      | .877                                     |                                                                    |                                                                |

## CHEMICAL &amp; GEOLOGICAL LABORATORIES LTD.

Edmonton

Fort St. John

Calgary

GAS ANALYSIS REPORT: Lab. No. 67-5036 Received: Feb. 23, 1968 Reported: Feb. 28, 1968Well: H.B. Cameron Hills A-05 Operator: Hudson's Bay Oil and Gas Company LimitedField or Area: Cameron Hills Location: 64° 04' 02.15" Lat. Elev.: K.B. 2556' Grd. 2543'  
117° 30' 27.44" Long.Zone and Formations: Keg River Sample Interval: 4876' - 4909'

Well production at sampling time: Oil \_\_\_\_\_ bpd; Gas \_\_\_\_\_ MCFD; Water \_\_\_\_\_ bpd

Sampled from: Flowline Sampled by: T.G. Eastland Testers Ltd. Date: Feb. 20, 1968Pressure: (a) at point of sampling 96 psig (b) Gas Bomb pressure 60 psig

Temperature: (a) at point of sampling \_\_\_\_\_ °F (b) Separator \_\_\_\_\_ °F

Pressures: Reservoir \_\_\_\_\_ Tubing \_\_\_\_\_ Casing \_\_\_\_\_ Separator \_\_\_\_\_

OTHER PERTINENT DATA D.S.T. #5 GTS at 500 MCFDRecovery: 110' sulfurous gas cut mud.

(Signed)

| COMPOSITION      | % by Volume   | G.P.M. in Imp. Gal. @ 60°F. & 14.65 PSIA | G.P.M. (Calculated)                                                       | SPECIFIC GRAVITY                                                              |
|------------------|---------------|------------------------------------------|---------------------------------------------------------------------------|-------------------------------------------------------------------------------|
| Helium           | <u>.10</u>    |                                          | pentanes + <u>.168</u>                                                    | Calculated <u>.602</u>                                                        |
| Hydrogen sulfide | <u>.00</u>    |                                          | at 12 lbs. <u>.170</u>                                                    | by Weight <u>.696</u>                                                         |
| Carbon dioxide   | <u>2.47</u>   |                                          | at 15 lbs. <u>.181</u>                                                    | CRITICALS (Calculated)                                                        |
| Oxygen           | <u>.00</u>    |                                          | at 22 lbs. <u>.212</u>                                                    | Pc <u>652.9</u>                                                               |
| Nitrogen         | <u>15.24</u>  |                                          | at 26 lbs. <u>.235</u>                                                    | Tc <u>348.5</u>                                                               |
| Methane          | <u>75.85</u>  |                                          | VAPOR PRESSURE (Calc.) of pentanes + <u>11.22</u>                         |                                                                               |
| Ethane           | <u>3.43</u>   |                                          | H <sub>2</sub> S Grains per 100 cu. ft. @ 60°F. & 14.65 p.s.i.a. <u>0</u> |                                                                               |
| Propane          | <u>1.66</u>   | <u>.379</u>                              | GROSS B.T.U. (Calc.) @ 60°F. & 14.65 p.s.i.a. <u>913.6</u>                |                                                                               |
| Isobutane        | <u>.26</u>    | <u>.071</u>                              | DEW POINT (Calc.) p.s.i.                                                  | 950 1050 1200                                                                 |
| N-butane         | <u>.49</u>    | <u>.128</u>                              | FAH <u>29</u> <u>25</u> <u>19</u>                                         |                                                                               |
| Isopentane       | <u>.14</u>    | <u>.042</u>                              | REMARKS                                                                   | Sample received in a 1000 cc. container under a pressure of 1½ psig. at 74°F. |
| N-pentane        | <u>.14</u>    | <u>.042</u>                              |                                                                           |                                                                               |
| Hexanes          | <u>.11</u>    | <u>.037</u>                              |                                                                           |                                                                               |
| Heptanes +       | <u>.11</u>    | <u>.047</u>                              |                                                                           |                                                                               |
| TOTAL            | <u>100.00</u> | <u>.746</u>                              |                                                                           |                                                                               |

# CHEMICAL & GEOLOGICAL LABORATORIES LTD.

Edmonton

Fair St. John

Calgary

ANALYSIS REPORT: Lab. No. E68-6070 Received: Feb. 20, 1968 Reported: Feb. 27, 1968

Well: Hudson's Bay Cameron Hills A-05 Operator: Hudson's Bay Oil and Gas Company Limited

Field or Area: Cameron Hills Location: 64° 04' 02.15" Lat., 117° 30' 27.44" Long. Elev.: K.B. 2556' Grd. 2543'

Zone and Formation: Wetmore Sample Interval: 4572' - 4602'

Well production at sampling time: Oil \_\_\_\_\_ bpd; Gas \_\_\_\_\_ MMCFD; Water \_\_\_\_\_ bpd

Sampled from: Line Sampled by: Cliff Jasman Date: Feb. 14, 1968

Pressure: (a) at point of sampling 432 psig (b) Gas Bomb pressure 40 psig

Temperature: (a) at point of sampling 78 °F (b) Separator \_\_\_\_\_ °F

Pressures: Reservoir \_\_\_\_\_ Tubing \_\_\_\_\_ Casing \_\_\_\_\_ Separator \_\_\_\_\_

OTHER PERTINENT DATA Method of Production: D.S.T. #2 Mud Type: gyp base

Recovery: 30% sulfurous water Height sample taken above tool: 30'

Cliff Jasman

(Signed) Hudson's Bay Oil & Gas

| COMPOSITION      | % by Volume   | G.P.M. in Imp. Gal. @ 60°F. & 14.65 PSIA | G.P.M. (Calculated)                                                         | SPECIFIC GRAVITY                                              |
|------------------|---------------|------------------------------------------|-----------------------------------------------------------------------------|---------------------------------------------------------------|
| Helium           | <u>.08</u>    |                                          | pentanes + <u>.079</u>                                                      | Calculated <u>.640</u>                                        |
| Hydrogen sulfide | <u>.21</u>    |                                          | at 12 lbs. <u>.079</u>                                                      | by Weight <u>.642</u>                                         |
| Carbon dioxide   | <u>5.37</u>   |                                          | at 15 lbs. <u>.084</u>                                                      | CRITICALS (Calculated)                                        |
| Oxygen           | <u>.00</u>    |                                          | at 22 lbs. <u>.098</u>                                                      | Pc <u>690.3</u>                                               |
| Nitrogen         | <u>2.31</u>   |                                          | at 26 lbs. <u>.108</u>                                                      | Tc <u>359.8</u>                                               |
| Methane          | <u>89.36</u>  |                                          | VAPOR PRESSURE (Calc.) of pentanes + <u>11.78</u>                           |                                                               |
| Ethane           | <u>1.38</u>   |                                          | H <sub>2</sub> S Grains per 100 cu. ft. @ 60°F. & 14.65 p.s.i.a. <u>132</u> |                                                               |
| Propane          | <u>.67</u>    | <u>.153</u>                              | GROSS B.T.U. (Calc.) @ 60°F. & 14.65 p.s.i.a. <u>965.7</u>                  |                                                               |
| Isobutane        | <u>.15</u>    | <u>.041</u>                              | DEW POINT (Calc.) p.s.i.                                                    | 950 1050 1200                                                 |
| N-butane         | <u>.23</u>    | <u>.060</u>                              | FAH                                                                         | 1 -2 -7                                                       |
| Isopentane       | <u>.07</u>    | <u>.021</u>                              | REMARKS                                                                     | When received for analysis the pressure was 95 psig. at 74°F. |
| N-pentane        | <u>.07</u>    | <u>.021</u>                              |                                                                             |                                                               |
| Hexanes          | <u>.06</u>    | <u>.020</u>                              |                                                                             |                                                               |
| Heptanes +       | <u>.04</u>    | <u>.017</u>                              |                                                                             |                                                               |
| TOTAL            | <u>100.00</u> | <u>.333</u>                              |                                                                             |                                                               |

DATE *March 19/60*

[illegible]



## DAILY DRILLERS REPORT

Hudson's Bay Oil and Gas Company Limited

DATE MARCH 18/68

| WELL NAME                                                                                     |  | LDG. FLG. TO KB |            | CASING RECORD | DEPTH | SIZE                                        | WEIGHT | GRADE                   | CEMENT   | ACID                  | PLUG DOWN  | COMPANY SUPERVISOR     |                  |                |    |                    |                   |                         |            |                       |      |                 |    |               |          |                    |  |                         |  |                       |  |
|-----------------------------------------------------------------------------------------------|--|-----------------|------------|---------------|-------|---------------------------------------------|--------|-------------------------|----------|-----------------------|------------|------------------------|------------------|----------------|----|--------------------|-------------------|-------------------------|------------|-----------------------|------|-----------------|----|---------------|----------|--------------------|--|-------------------------|--|-----------------------|--|
| CONTRACTOR                                                                                    |  | K. B. ELEV.     |            |               |       |                                             |        |                         |          |                       |            |                        |                  |                |    |                    |                   |                         |            |                       |      |                 |    |               |          |                    |  |                         |  |                       |  |
| RIG NO.                                                                                       |  | TOOL PUSHER     |            | GRD. ELEV.    |       |                                             |        |                         |          |                       |            |                        |                  |                |    |                    |                   |                         |            |                       |      |                 |    |               |          |                    |  |                         |  |                       |  |
| 12 P.M. TO 8 A.M.                                                                             |  |                 |            |               |       |                                             |        |                         |          |                       |            |                        | 8 A.M. TO 4 P.M. |                |    |                    | 4 P.M. TO 12 P.M. |                         |            |                       |      |                 |    |               |          |                    |  |                         |  |                       |  |
| DEPTH                                                                                         |  | START           |            | PROGRESS      |       | END                                         |        | START                   |          | PROGRESS              |            | END                    |                  | START          |    | PROGRESS           |                   | END                     |            |                       |      |                 |    |               |          |                    |  |                         |  |                       |  |
| BIT RECORD                                                                                    |  | NO.             | SERIAL NO. | TYPE          | SIZE  | FROM                                        | TO     | FOOTAGE                 | HRS. RUN | NO.                   | SERIAL NO. | TYPE                   | SIZE             | FROM           | TO | FOOTAGE            | HRS. RUN          | NO.                     | SERIAL NO. | TYPE                  | SIZE | FROM            | TO | FOOTAGE       | HRS. RUN |                    |  |                         |  |                       |  |
| DRILLING DATA                                                                                 |  | LINER SIZE      |            | PUMP PRESSURE |       | TABLE SPEED                                 |        | WEIGHT ON BIT           |          | LINER SIZE            |            | PUMP PRESSURE          |                  | TABLE SPEED    |    | WEIGHT ON BIT      |                   | LINER SIZE              |            | PUMP PRESSURE         |      | TABLE SPEED     |    | WEIGHT ON BIT |          |                    |  |                         |  |                       |  |
| DRILLING STRING                                                                               |  | SIZE            |            | STANDS        |       | SINGLES                                     |        | DRILL COL.              |          | KELLY IN              |            | CORE BBL.              |                  | SIZE           |    | STANDS             |                   | SINGLES                 |            | DRILL COL.            |      | KELLY IN        |    | CORE BBL.     |          |                    |  |                         |  |                       |  |
| MUD RECORD                                                                                    |  | TYPE OF MUD     |            | WEIGHT        |       | VIS                                         |        | WL                      |          | PH                    |            | FC                     |                  | TYPE OF MUD    |    | WEIGHT             |                   | VIS                     |            | WL                    |      | PH              |    | FC            |          |                    |  |                         |  |                       |  |
| CORING                                                                                        |  | NO.             |            | FROM          |       | TO                                          |        | RECOVERED               |          | FORMATION             |            | NO.                    |                  | FROM           |    | TO                 |                   | RECOVERED               |            | FORMATION             |      | NO.             |    | FROM          |          | TO                 |  | RECOVERED               |  | FORMATION             |  |
| SURVEY                                                                                        |  | DEG. AT         |            | FT.           |       | DEG. AT                                     |        | FT.                     |          | DEG. AT               |            | FT.                    |                  | DEG. AT        |    | FT.                |                   | DEG. AT                 |            | FT.                   |      | DEG. AT         |    | FT.           |          | DEG. AT            |  | FT.                     |  |                       |  |
| DRILL STEM TESTS                                                                              |  | NO.             |            | INTERVAL      |       | VALVE OPEN (MINS.)                          |        | INITIAL SHUT-IN (MINS.) |          | FINAL SHUT-IN (MINS.) |            | NO.                    |                  | INTERVAL       |    | VALVE OPEN (MINS.) |                   | INITIAL SHUT-IN (MINS.) |            | FINAL SHUT-IN (MINS.) |      | NO.             |    | INTERVAL      |          | VALVE OPEN (MINS.) |  | INITIAL SHUT-IN (MINS.) |  | FINAL SHUT-IN (MINS.) |  |
|                                                                                               |  | GAS TO SURFACE  |            | MIN. @        |       | MCF/D MAX.                                  |        | GAS TO SURFACE          |          | MIN. @                |            | MCF/D MAX.             |                  | GAS TO SURFACE |    | MIN. @             |                   | MCF/D MAX.              |            | GAS TO SURFACE        |      | MIN. @          |    | MCF/D MAX.    |          |                    |  |                         |  |                       |  |
|                                                                                               |  | OIL TO SURFACE  |            | MIN. @        |       | BBL/D MAX.                                  |        | OIL TO SURFACE          |          | MIN. @                |            | BBL/D MAX.             |                  | OIL TO SURFACE |    | MIN. @             |                   | BBL/D MAX.              |            | OIL TO SURFACE        |      | MIN. @          |    | BBL/D MAX.    |          |                    |  |                         |  |                       |  |
|                                                                                               |  | RECOVERY:       |            |               |       |                                             |        | RECOVERY:               |          |                       |            |                        |                  | RECOVERY:      |    |                    |                   |                         |            | RECOVERY:             |      |                 |    |               |          |                    |  |                         |  |                       |  |
|                                                                                               |  | PRESSURES (PSI) |            | HP            |       | FP                                          |        | ISIP                    |          | FSIP                  |            | PRESSURES (PSI)        |                  | HP             |    | FP                 |                   | ISIP                    |            | FSIP                  |      | PRESSURES (PSI) |    | HP            |          | FP                 |  | ISIP                    |  | FSIP                  |  |
| REMARKS INCLUDING:<br>CEMENTING<br>LOGGING<br>PERFORATING<br>ACIDIZING<br>FRACTURING<br>PLUGS |  | FROM            |            | TO            |       | DESCRIPTION OF WORK                         |        | FROM                    |          | TO                    |            | DESCRIPTION OF WORK    |                  | FROM           |    | TO                 |                   | DESCRIPTION OF WORK     |            |                       |      |                 |    |               |          |                    |  |                         |  |                       |  |
|                                                                                               |  | 9.00            |            | 9.30          |       | SERVING R.L. & START MOTORS                 |        | 6.00                    |          | 7.30                  |            | R.L. & START MOTORS    |                  |                |    |                    |                   |                         |            |                       |      |                 |    |               |          |                    |  |                         |  |                       |  |
|                                                                                               |  | 9.30            |            | 9.00          |       | FINISH FULL OUT.                            |        | 8.30                    |          | 10.00                 |            | MC CALL OUTH PERFORATE |                  |                |    |                    |                   |                         |            |                       |      |                 |    |               |          |                    |  |                         |  |                       |  |
|                                                                                               |  | 9.00            |            | 12.00         |       | MAKE UP PACKER & BOTTOM HOLE TOOLS & RUN IN |        |                         |          |                       |            | SHUT DOWN FOR NIGHT.   |                  |                |    |                    |                   |                         |            |                       |      |                 |    |               |          |                    |  |                         |  |                       |  |
|                                                                                               |  | 12.00           |            | 3.30          |       | R.L. up RUN, MIX CORBUM 302 & DISPLACE HOLE |        |                         |          |                       |            |                        |                  |                |    |                    |                   |                         |            |                       |      |                 |    |               |          |                    |  |                         |  |                       |  |
|                                                                                               |  | 3.30            |            | 5.30          |       | R.L. up B.O. & SET PACKER                   |        |                         |          |                       |            |                        |                  |                |    |                    |                   |                         |            |                       |      |                 |    |               |          |                    |  |                         |  |                       |  |
|                                                                                               |  | 5.30            |            | 6.00          |       | PRESSURE TEST 7.1500 PSI OK                 |        |                         |          |                       |            |                        |                  |                |    |                    |                   |                         |            |                       |      |                 |    |               |          |                    |  |                         |  |                       |  |
|                                                                                               |  | 5.30            |            | 6.00          |       | 1st STOP WELL HEAD                          |        |                         |          |                       |            |                        |                  |                |    |                    |                   |                         |            |                       |      |                 |    |               |          |                    |  |                         |  |                       |  |
|                                                                                               |  | DRILLER         |            | NO. HELPERS   |       | DRILLER                                     |        | NO. HELPERS             |          | DRILLER               |            | NO. HELPERS            |                  | DRILLER        |    | NO. HELPERS        |                   |                         |            |                       |      |                 |    |               |          |                    |  |                         |  |                       |  |

## DAILY DRILLERS REPORT

Hudson's Bay Oil and Gas Company Limited

DATE

March 17/68

|            |                         |                 |  |        |       |      |        |       |        |      |           |            |
|------------|-------------------------|-----------------|--|--------|-------|------|--------|-------|--------|------|-----------|------------|
| WELL NAME  | H.B. Cameron Hills A-05 | LDG. FLG. TO KB |  | CASING | DEPTH | SIZE | WEIGHT | GRADE | CEMENT | ACID | PLUG DOWN | COMPANY    |
| CONTRACTOR | Bell Well Service       | K. B. ELEV.     |  | RECORD |       |      |        |       |        |      |           | SUPERVISOR |
| RIG NO.    | #27                     | GRD. ELEV.      |  |        |       |      |        |       |        |      |           | Loggins    |
|            | TOOL PUSHER             |                 |  |        |       |      |        |       |        |      |           |            |

|                                                                                               |                   |                    |                                 |            |                         |           |                       |          |                  |                    |                            |            |                         |           |                       |          |                   |                    |                     |            |                         |           |                       |          |  |  |  |  |  |  |
|-----------------------------------------------------------------------------------------------|-------------------|--------------------|---------------------------------|------------|-------------------------|-----------|-----------------------|----------|------------------|--------------------|----------------------------|------------|-------------------------|-----------|-----------------------|----------|-------------------|--------------------|---------------------|------------|-------------------------|-----------|-----------------------|----------|--|--|--|--|--|--|
|                                                                                               | 12 P.M. TO 8 A.M. |                    |                                 |            |                         |           |                       |          | 8 A.M. TO 4 P.M. |                    |                            |            |                         |           |                       |          | 4 P.M. TO 12 P.M. |                    |                     |            |                         |           |                       |          |  |  |  |  |  |  |
| DEPTH                                                                                         | START             |                    |                                 |            |                         |           |                       |          | START            |                    |                            |            |                         |           |                       |          | START             |                    |                     |            |                         |           |                       |          |  |  |  |  |  |  |
|                                                                                               | PROGRESS          |                    |                                 |            |                         |           |                       |          | PROGRESS         |                    |                            |            |                         |           |                       |          | PROGRESS          |                    |                     |            |                         |           |                       |          |  |  |  |  |  |  |
|                                                                                               | END               |                    |                                 |            |                         |           |                       |          | END              |                    |                            |            |                         |           |                       |          | END               |                    |                     |            |                         |           |                       |          |  |  |  |  |  |  |
| BIT RECORD                                                                                    | NO.               | SERIAL NO.         | TYPE                            | SIZE       | FROM                    | TO        | FOOTAGE               | HRS. RUN | NO.              | SERIAL NO.         | TYPE                       | SIZE       | FROM                    | TO        | FOOTAGE               | HRS. RUN | NO.               | SERIAL NO.         | TYPE                | SIZE       | FROM                    | TO        | FOOTAGE               | HRS. RUN |  |  |  |  |  |  |
|                                                                                               |                   |                    |                                 |            |                         |           |                       |          |                  |                    |                            |            |                         |           |                       |          |                   |                    |                     |            |                         |           |                       |          |  |  |  |  |  |  |
|                                                                                               |                   |                    |                                 |            |                         |           |                       |          |                  |                    |                            |            |                         |           |                       |          |                   |                    |                     |            |                         |           |                       |          |  |  |  |  |  |  |
|                                                                                               |                   |                    |                                 |            |                         |           |                       |          |                  |                    |                            |            |                         |           |                       |          |                   |                    |                     |            |                         |           |                       |          |  |  |  |  |  |  |
| DRILLING DATA                                                                                 | LINER SIZE        |                    | PUMP PRESSURE                   |            | TABLE SPEED             |           | WEIGHT ON BIT         |          | LINER SIZE       |                    | PUMP PRESSURE              |            | TABLE SPEED             |           | WEIGHT ON BIT         |          | LINER SIZE        |                    | PUMP PRESSURE       |            | TABLE SPEED             |           | WEIGHT ON BIT         |          |  |  |  |  |  |  |
|                                                                                               |                   |                    |                                 |            |                         |           |                       |          |                  |                    |                            |            |                         |           |                       |          |                   |                    |                     |            |                         |           |                       |          |  |  |  |  |  |  |
| DRILLING STRING                                                                               | SIZE              | STANDS             | SINGLES                         | DRILL COL. | KELLY IN                | CORE BBL. |                       |          | SIZE             | STANDS             | SINGLES                    | DRILL COL. | KELLY IN                | CORE BBL. |                       |          | SIZE              | STANDS             | SINGLES             | DRILL COL. | KELLY IN                | CORE BBL. |                       |          |  |  |  |  |  |  |
|                                                                                               |                   |                    |                                 |            |                         |           |                       |          |                  |                    |                            |            |                         |           |                       |          |                   |                    |                     |            |                         |           |                       |          |  |  |  |  |  |  |
| MUD RECORD                                                                                    | TYPE OF MUD       |                    | WEIGHT                          |            | VIS                     | WL        | PH                    | FC       | TYPE OF MUD      |                    | WEIGHT                     |            | VIS                     | WL        | PH                    | FC       | TYPE OF MUD       |                    | WEIGHT              |            | VIS                     | WL        | PH                    | FC       |  |  |  |  |  |  |
|                                                                                               |                   |                    |                                 |            |                         |           |                       |          |                  |                    |                            |            |                         |           |                       |          |                   |                    |                     |            |                         |           |                       |          |  |  |  |  |  |  |
|                                                                                               |                   |                    |                                 |            |                         |           |                       |          |                  |                    |                            |            |                         |           |                       |          |                   |                    |                     |            |                         |           |                       |          |  |  |  |  |  |  |
|                                                                                               | ADDITIVES         |                    |                                 |            |                         |           |                       |          | ADDITIVES        |                    |                            |            |                         |           |                       |          | ADDITIVES         |                    |                     |            |                         |           |                       |          |  |  |  |  |  |  |
|                                                                                               |                   |                    |                                 |            |                         |           |                       |          |                  |                    |                            |            |                         |           |                       |          |                   |                    |                     |            |                         |           |                       |          |  |  |  |  |  |  |
| CORING                                                                                        | NO.               | FROM               | TO                              | RECOVERED  | FORMATION               |           |                       |          | NO.              | FROM               | TO                         | RECOVERED  | FORMATION               |           |                       |          | NO.               | FROM               | TO                  | RECOVERED  | FORMATION               |           |                       |          |  |  |  |  |  |  |
|                                                                                               |                   |                    |                                 |            |                         |           |                       |          |                  |                    |                            |            |                         |           |                       |          |                   |                    |                     |            |                         |           |                       |          |  |  |  |  |  |  |
| SURVEY                                                                                        | DEG. AT           | FT.                | DEG. AT                         | FT.        | DEG. AT                 | FT.       |                       |          | DEG. AT          | FT.                | DEG. AT                    | FT.        | DEG. AT                 | FT.       |                       |          | DEG. AT           | FT.                | DEG. AT             | FT.        | DEG. AT                 | FT.       |                       |          |  |  |  |  |  |  |
|                                                                                               |                   |                    |                                 |            |                         |           |                       |          |                  |                    |                            |            |                         |           |                       |          |                   |                    |                     |            |                         |           |                       |          |  |  |  |  |  |  |
| DRILL STEM TESTS                                                                              | NO.               | INTERVAL           |                                 |            | FORMATION               |           |                       |          | NO.              | INTERVAL           |                            |            | FORMATION               |           |                       |          | NO.               | INTERVAL           |                     |            | FORMATION               |           |                       |          |  |  |  |  |  |  |
|                                                                                               |                   | VALVE OPEN (MINS.) |                                 |            | INITIAL SHUT-IN (MINS.) |           | FINAL SHUT-IN (MINS.) |          |                  | VALVE OPEN (MINS.) |                            |            | INITIAL SHUT-IN (MINS.) |           | FINAL SHUT-IN (MINS.) |          |                   | VALVE OPEN (MINS.) |                     |            | INITIAL SHUT-IN (MINS.) |           | FINAL SHUT-IN (MINS.) |          |  |  |  |  |  |  |
|                                                                                               |                   | GAS TO SURFACE     |                                 |            | MIN. @                  |           | MCF/D MAX.            |          |                  | GAS TO SURFACE     |                            |            | MIN. @                  |           | MCF/D MAX.            |          |                   | GAS TO SURFACE     |                     |            | MIN. @                  |           | MCF/D MAX.            |          |  |  |  |  |  |  |
|                                                                                               |                   | OIL TO SURFACE     |                                 |            | MIN. @                  |           | BBL/D MAX.            |          |                  | OIL TO SURFACE     |                            |            | MIN. @                  |           | BBL/D MAX.            |          |                   | OIL TO SURFACE     |                     |            | MIN. @                  |           | BBL/D MAX.            |          |  |  |  |  |  |  |
|                                                                                               |                   | RECOVERY:          |                                 |            |                         |           |                       |          |                  | RECOVERY:          |                            |            |                         |           |                       |          |                   | RECOVERY:          |                     |            |                         |           |                       |          |  |  |  |  |  |  |
|                                                                                               |                   | PRESSURES (PSI):   |                                 | HP         | FP                      | ISIP      | FSIP                  |          |                  | PRESSURES (PSI):   |                            | HP         | FP                      | ISIP      | FSIP                  |          |                   | PRESSURES (PSI):   |                     | HP         | FP                      | ISIP      | FSIP                  |          |  |  |  |  |  |  |
| REMARKS INCLUDING:<br>CEMENTING<br>LOGGING<br>PERFORATING<br>ACIDIZING<br>FRACTURING<br>PLUGS | FROM              | TO                 | DESCRIPTION OF WORK             |            |                         |           |                       |          | FROM             | TO                 | DESCRIPTION OF WORK        |            |                         |           |                       |          | FROM              | TO                 | DESCRIPTION OF WORK |            |                         |           |                       |          |  |  |  |  |  |  |
|                                                                                               | 9.00              | 9.30               | SERVICE RIG & START MOTOR       |            |                         |           |                       |          | 4.00             | 6.00               | OCC. HOLE CLEAN, PRESSURE  |            |                         |           |                       |          |                   |                    |                     |            |                         |           |                       |          |  |  |  |  |  |  |
|                                                                                               | 9.30              | 10.00              | REMOVE WELL HEAD, INSTALL       |            |                         |           |                       |          |                  |                    | UP ON B.O.P. TO 1500 PSI & |            |                         |           |                       |          |                   |                    |                     |            |                         |           |                       |          |  |  |  |  |  |  |
|                                                                                               |                   |                    | B.O.P. & RIG UP TO SURF. EQUIP. |            |                         |           |                       |          | 6.00             | 8.00               | Pull out                   |            |                         |           |                       |          |                   |                    |                     |            |                         |           |                       |          |  |  |  |  |  |  |
|                                                                                               | 10.00             | 3.00               | Roll over measure, steam        |            |                         |           |                       |          | 8.00             | 8.30               | DRAIN LINE PUMP & SHUT     |            |                         |           |                       |          |                   |                    |                     |            |                         |           |                       |          |  |  |  |  |  |  |
|                                                                                               |                   |                    | OUT, DR. E. MAKE UP BIT         |            |                         |           |                       |          |                  |                    | DOWN FOR NIGHT.            |            |                         |           |                       |          |                   |                    |                     |            |                         |           |                       |          |  |  |  |  |  |  |
|                                                                                               |                   |                    | SCRAPER & RUN IN.               |            |                         |           |                       |          |                  |                    |                            |            |                         |           |                       |          |                   |                    |                     |            |                         |           |                       |          |  |  |  |  |  |  |
|                                                                                               | 3.00              | 4.00               | Rig up pump & lines             |            |                         |           |                       |          |                  |                    |                            |            |                         |           |                       |          |                   |                    |                     |            |                         |           |                       |          |  |  |  |  |  |  |
|                                                                                               |                   |                    |                                 |            |                         |           |                       |          |                  |                    |                            |            |                         |           |                       |          |                   |                    |                     |            |                         |           |                       |          |  |  |  |  |  |  |
|                                                                                               |                   |                    |                                 |            |                         |           |                       |          |                  |                    |                            |            |                         |           |                       |          |                   |                    |                     |            |                         |           |                       |          |  |  |  |  |  |  |
|                                                                                               |                   |                    |                                 |            |                         |           |                       |          |                  |                    |                            |            |                         |           |                       |          |                   |                    |                     |            |                         |           |                       |          |  |  |  |  |  |  |
|                                                                                               |                   |                    |                                 |            |                         |           |                       |          |                  |                    |                            |            |                         |           |                       |          |                   |                    |                     |            |                         |           |                       |          |  |  |  |  |  |  |
|                                                                                               |                   |                    |                                 |            |                         |           |                       |          |                  |                    |                            |            |                         |           |                       |          |                   |                    |                     |            |                         |           |                       |          |  |  |  |  |  |  |
|                                                                                               |                   |                    |                                 |            |                         |           |                       |          |                  |                    |                            |            |                         |           |                       |          |                   |                    |                     |            |                         |           |                       |          |  |  |  |  |  |  |
|                                                                                               |                   |                    |                                 |            |                         |           |                       |          |                  |                    |                            |            |                         |           |                       |          |                   |                    |                     |            |                         |           |                       |          |  |  |  |  |  |  |
|                                                                                               |                   |                    |                                 |            |                         |           |                       |          |                  |                    |                            |            |                         |           |                       |          |                   |                    |                     |            |                         |           |                       |          |  |  |  |  |  |  |
|                                                                                               |                   |                    |                                 |            |                         |           |                       |          |                  |                    |                            |            |                         |           |                       |          |                   |                    |                     |            |                         |           |                       |          |  |  |  |  |  |  |
|                                                                                               |                   |                    |                                 |            |                         |           |                       |          |                  |                    |                            |            |                         |           |                       |          |                   |                    |                     |            |                         |           |                       |          |  |  |  |  |  |  |
|                                                                                               |                   |                    |                                 |            |                         |           |                       |          |                  |                    |                            |            |                         |           |                       |          |                   |                    |                     |            |                         |           |                       |          |  |  |  |  |  |  |
|                                                                                               |                   |                    |                                 |            |                         |           |                       |          |                  |                    |                            |            |                         |           |                       |          |                   |                    |                     |            |                         |           |                       |          |  |  |  |  |  |  |
|                                                                                               |                   |                    |                                 |            |                         |           |                       |          |                  |                    |                            |            |                         |           |                       |          |                   |                    |                     |            |                         |           |                       |          |  |  |  |  |  |  |
|                                                                                               |                   |                    |                                 |            |                         |           |                       |          |                  |                    |                            |            |                         |           |                       |          |                   |                    |                     |            |                         |           |                       |          |  |  |  |  |  |  |
|                                                                                               |                   |                    |                                 |            |                         |           |                       |          |                  |                    |                            |            |                         |           |                       |          |                   |                    |                     |            |                         |           |                       |          |  |  |  |  |  |  |
|                                                                                               |                   |                    |                                 |            |                         |           |                       |          |                  |                    |                            |            |                         |           |                       |          |                   |                    |                     |            |                         |           |                       |          |  |  |  |  |  |  |
|                                                                                               |                   |                    |                                 |            |                         |           |                       |          |                  |                    |                            |            |                         |           |                       |          |                   |                    |                     |            |                         |           |                       |          |  |  |  |  |  |  |
|                                                                                               |                   |                    |                                 |            |                         |           |                       |          |                  |                    |                            |            |                         |           |                       |          |                   |                    |                     |            |                         |           |                       |          |  |  |  |  |  |  |
|                                                                                               |                   |                    |                                 |            |                         |           |                       |          |                  |                    |                            |            |                         |           |                       |          |                   |                    |                     |            |                         |           |                       |          |  |  |  |  |  |  |
|                                                                                               |                   |                    |                                 |            |                         |           |                       |          |                  |                    |                            |            |                         |           |                       |          |                   |                    |                     |            |                         |           |                       |          |  |  |  |  |  |  |
|                                                                                               |                   |                    |                                 |            |                         |           |                       |          |                  |                    |                            |            |                         |           |                       |          |                   |                    |                     |            |                         |           |                       |          |  |  |  |  |  |  |
|                                                                                               |                   |                    |                                 |            |                         |           |                       |          |                  |                    |                            |            |                         |           |                       |          |                   |                    |                     |            |                         |           |                       |          |  |  |  |  |  |  |
|                                                                                               |                   |                    |                                 |            |                         |           |                       |          |                  |                    |                            |            |                         |           |                       |          |                   |                    |                     |            |                         |           |                       |          |  |  |  |  |  |  |
|                                                                                               |                   |                    |                                 |            |                         |           |                       |          |                  |                    |                            |            |                         |           |                       |          |                   |                    | </                  |            |                         |           |                       |          |  |  |  |  |  |  |

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|                                                                                               |  |                                     |                  |                           |            |                                        |           |                       |          |             |            |                    |           |                         |           |           |            |                       |            |        |      |                    |                    |                             |          |             |  |                       |  |               |  |         |  |           |  |  |  |    |  |  |  |                 |                  |                        |  |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------------------------------------------------------------------|--|-------------------------------------|------------------|---------------------------|------------|----------------------------------------|-----------|-----------------------|----------|-------------|------------|--------------------|-----------|-------------------------|-----------|-----------|------------|-----------------------|------------|--------|------|--------------------|--------------------|-----------------------------|----------|-------------|--|-----------------------|--|---------------|--|---------|--|-----------|--|--|--|----|--|--|--|-----------------|------------------|------------------------|--|----|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| WELL NAME                                                                                     |  | H.B. CAMERON HILLS A5-60-10-117-30W |                  |                           |            |                                        |           |                       |          |             |            | LDG. FLG. TO KB    |           | CASING RECORD           |           | DEPTH     | SIZE       | WEIGHT                | GRADE      | CEMENT | ACID | PLUG DOWN          | COMPANY SUPERVISOR |                             |          |             |  |                       |  |               |  |         |  |           |  |  |  |    |  |  |  |                 |                  |                        |  |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CONTRACTOR                                                                                    |  | S.T. DRILLING                       |                  |                           |            |                                        |           |                       |          |             |            | TYPE RIG           |           | K. B. ELEV.             |           | 826       | 8 5/8      | 24                    | J-55       | 465    |      | Feb 1/69           |                    |                             |          |             |  |                       |  |               |  |         |  |           |  |  |  |    |  |  |  |                 |                  |                        |  |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| R.G. NO.                                                                                      |  | 1E                                  |                  |                           |            |                                        |           |                       |          |             |            | TOOL PUSHER        |           | GRD. ELEV.              |           | 4969      | 5 1/2      | 14                    | J-5        | 220    |      | Feb 24/69          | Cliff Jansman      |                             |          |             |  |                       |  |               |  |         |  |           |  |  |  |    |  |  |  |                 |                  |                        |  |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 12 P.M. TO 8 A.M.                                                                             |  |                                     |                  |                           |            |                                        |           |                       |          |             |            | 8 A.M. TO 4 P.M.   |           |                         |           |           |            |                       |            |        |      |                    |                    | 4 P.M. TO 12 P.M.           |          |             |  |                       |  |               |  |         |  |           |  |  |  |    |  |  |  |                 |                  |                        |  |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| DEPTH                                                                                         |  | START                               |                  |                           |            |                                        |           |                       |          |             |            | PROGRESS           |           |                         |           |           |            |                       |            |        |      | END                |                    |                             |          |             |  |                       |  |               |  | START   |  | PROGRESS  |  |  |  |    |  |  |  |                 |                  | END                    |  |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| BIT RECORD                                                                                    |  | NO.                                 | SERIAL NO.       | TYPE                      | SIZE       | FROM                                   | TO        | FOOTAGE               | HRS. RUN | NO.         | SERIAL NO. | TYPE               | SIZE      | FROM                    | TO        | FOOTAGE   | HRS. RUN   | NO.                   | SERIAL NO. | TYPE   | SIZE | FROM               | TO                 | FOOTAGE                     | HRS. RUN |             |  |                       |  |               |  |         |  |           |  |  |  |    |  |  |  |                 |                  |                        |  |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| DRILLING DATA                                                                                 |  | LINER SIZE                          |                  |                           |            | PUMP PRESSURE                          |           |                       |          | TABLE SPEED |            |                    |           | WEIGHT ON BIT           |           |           |            | LINER SIZE            |            |        |      | PUMP PRESSURE      |                    |                             |          | TABLE SPEED |  |                       |  | WEIGHT ON BIT |  |         |  |           |  |  |  |    |  |  |  |                 |                  |                        |  |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| DRILLING STRING                                                                               |  | SIZE                                | STANDS           | SINGLES                   | DRILL COL. | KELLY IN                               | CORE BBL. | SIZE                  | STANDS   | SINGLES     | DRILL COL. | KELLY IN           | CORE BBL. | SIZE                    | STANDS    | SINGLES   | DRILL COL. | KELLY IN              | CORE BBL.  |        |      |                    |                    |                             |          |             |  |                       |  |               |  |         |  |           |  |  |  |    |  |  |  |                 |                  |                        |  |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| MUD RECORD                                                                                    |  | TYPE OF MUD                         |                  |                           |            | WEIGHT                                 |           |                       |          | VIS         |            |                    |           | WL                      |           |           |            | PH                    |            |        |      | FC                 |                    |                             |          | TYPE OF MUD |  |                       |  | WEIGHT        |  |         |  | VIS       |  |  |  | WL |  |  |  | PH              |                  |                        |  | FC |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                               |  | ADDITIVES                           |                  |                           |            | Gel 500 <sup>th</sup> mixed w/ cement. |           |                       |          |             |            |                    |           |                         |           |           |            |                       |            |        |      |                    |                    |                             |          |             |  |                       |  | ADDITIVES     |  |         |  |           |  |  |  |    |  |  |  |                 |                  |                        |  |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CORING                                                                                        |  | NO.                                 | FROM             | TO                        | RECOVERED  | FORMATION                              | NO.       | FROM                  | TO       | RECOVERED   | FORMATION  | NO.                | FROM      | TO                      | RECOVERED | FORMATION |            |                       |            |        |      |                    |                    |                             |          |             |  |                       |  |               |  |         |  |           |  |  |  |    |  |  |  |                 |                  |                        |  |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| SURVEY                                                                                        |  | DEG. AT                             |                  | FT.                       |            | DEG. AT                                |           | FT.                   |          | DEG. AT     |            | FT.                |           | DEG. AT                 |           | FT.       |            | DEG. AT               |            | FT.    |      | DEG. AT            |                    | FT.                         |          | DEG. AT     |  | FT.                   |  | DEG. AT       |  | FT.     |  |           |  |  |  |    |  |  |  |                 |                  |                        |  |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| DRILL STEM TESTS                                                                              |  | NO.                                 |                  | INTERVAL                  |            |                                        |           | FORMATION             |          |             |            | NO.                |           | INTERVAL                |           |           |            | FORMATION             |            |        |      | NO.                |                    | INTERVAL                    |          |             |  | FORMATION             |  |               |  |         |  |           |  |  |  |    |  |  |  |                 |                  |                        |  |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                               |  | VALVE OPEN (MINS.)                  |                  | INITIAL SHUT-IN (MINS.)   |            |                                        |           | FINAL SHUT-IN (MINS.) |          |             |            | VALVE OPEN (MINS.) |           | INITIAL SHUT-IN (MINS.) |           |           |            | FINAL SHUT-IN (MINS.) |            |        |      | VALVE OPEN (MINS.) |                    | INITIAL SHUT-IN (MINS.)     |          |             |  | FINAL SHUT-IN (MINS.) |  |               |  |         |  |           |  |  |  |    |  |  |  |                 |                  |                        |  |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                               |  | GAS TO SURFACE                      |                  | MIN. @                    |            |                                        |           | MCF/D MAX.            |          |             |            | GAS TO SURFACE     |           | MIN. @                  |           |           |            | MCF/D MAX.            |            |        |      | GAS TO SURFACE     |                    | MIN. @                      |          |             |  | MCF/D MAX.            |  |               |  |         |  |           |  |  |  |    |  |  |  |                 |                  |                        |  |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                               |  | OIL TO SURFACE                      |                  | MIN. @                    |            |                                        |           | BBL/D MAX.            |          |             |            | OIL TO SURFACE     |           | MIN. @                  |           |           |            | BBL/D MAX.            |            |        |      | OIL TO SURFACE     |                    | MIN. @                      |          |             |  | BBL/D MAX.            |  |               |  |         |  |           |  |  |  |    |  |  |  |                 |                  |                        |  |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                               |  | RECOVERY:                           |                  |                           |            |                                        |           |                       |          |             |            |                    |           |                         |           |           |            |                       |            |        |      | RECOVERY:          |                    |                             |          |             |  |                       |  |               |  |         |  |           |  |  |  |    |  |  |  | RECOVERY:       |                  |                        |  |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                               |  | PRESSURES (PSI):                    |                  | HP                        |            | FP                                     |           | ISIP                  |          | FSIP        |            | PRESSURES (PSI):   |           | HP                      |           | FP        |            | ISIP                  |            | FSIP   |      | PRESSURES (PSI):   |                    | HP                          |          | FP          |  | ISIP                  |  | FSIP          |  |         |  |           |  |  |  |    |  |  |  |                 |                  |                        |  |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| REMARKS INCLUDING:<br>CEMENTING<br>LOGGING<br>PERFORATING<br>ACIDIZING<br>FRACTURING<br>PLUGS |  | FROM                                | TO               | DESCRIPTION OF WORK       |            |                                        |           |                       |          |             |            |                    |           |                         |           |           |            |                       |            |        |      | FROM               | TO                 | DESCRIPTION OF WORK         |          |             |  |                       |  |               |  |         |  |           |  |  |  |    |  |  |  | FROM            | TO               | DESCRIPTION OF WORK    |  |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                               |  | 12 <sup>00</sup>                    | 12 <sup>15</sup> | FINISH LAYING DOWN D.C.'s |            |                                        |           |                       |          |             |            |                    |           |                         |           |           |            |                       |            |        |      | 8 <sup>00</sup>    | 8 <sup>30</sup>    | Circ to Cement              |          |             |  |                       |  |               |  |         |  |           |  |  |  |    |  |  |  | 4 <sup>00</sup> | 12 <sup>00</sup> | Dear out               |  |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                               |  | 12 <sup>15</sup>                    | 1 <sup>00</sup>  | Rig To Run CASING         |            |                                        |           |                       |          |             |            |                    |           |                         |           |           |            |                       |            |        |      | 8 <sup>30</sup>    | 8 <sup>45</sup>    | Rig to Cement               |          |             |  |                       |  |               |  |         |  |           |  |  |  |    |  |  |  |                 |                  |                        |  |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                               |  | 1 <sup>00</sup>                     | 6 <sup>30</sup>  | RUNNING CASING            |            |                                        |           |                       |          |             |            |                    |           |                         |           |           |            |                       |            |        |      | 8 <sup>45</sup>    | 9 <sup>15</sup>    | Cementing                   |          |             |  |                       |  |               |  |         |  |           |  |  |  |    |  |  |  |                 |                  | RIC RELEASED @ 4:00 PM |  |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                               |  | 6 <sup>30</sup>                     | 8 <sup>00</sup>  | CIRC. TO CEMENT           |            |                                        |           |                       |          |             |            |                    |           |                         |           |           |            |                       |            |        |      | 9 <sup>15</sup>    | 10 <sup>00</sup>   | Pump plug down @ 10 AM      |          |             |  |                       |  |               |  |         |  |           |  |  |  |    |  |  |  |                 |                  | Feb 24 1969            |  |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                               |  |                                     |                  |                           |            |                                        |           |                       |          |             |            |                    |           |                         |           |           |            |                       |            |        |      | 10 <sup>00</sup>   |                    | Dig Cellar, set slips,      |          |             |  |                       |  |               |  |         |  |           |  |  |  |    |  |  |  |                 |                  | Cliff Jansman          |  |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                               |  |                                     |                  |                           |            |                                        |           |                       |          |             |            |                    |           |                         |           |           |            |                       |            |        |      |                    |                    | cut casing lay down B.O.P's |          |             |  |                       |  |               |  |         |  |           |  |  |  |    |  |  |  |                 |                  |                        |  |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                               |  |                                     |                  |                           |            |                                        |           |                       |          |             |            |                    |           |                         |           |           |            |                       |            |        |      | 4 <sup>30</sup>    |                    | put on Shell Head           |          |             |  |                       |  |               |  |         |  |           |  |  |  |    |  |  |  |                 |                  |                        |  |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| DRILLER                                                                                       |  | B. Ammons                           |                  |                           |            |                                        |           |                       |          |             |            | NO. HELPERS        |           | 4                       |           | DRILLER   |            | J.L. Clemens          |            |        |      |                    |                    |                             |          |             |  | NO. HELPERS           |  | 4             |  | DRILLER |  | J. Embrey |  |  |  |    |  |  |  |                 |                  | NO. HELPERS            |  | 4  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

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|                    |  |                                     |                 |                         |            |                       |           |                    |          |                         |            |                       |           |                    |                 |                         |            |                       |            |                    |           |                         |                    |                       |           |                    |                 |                         |            |                       |           |                    |          |                         |          |                       |  |  |  |  |  |                     |  |     |  |  |  |  |  |  |  |               |  |       |  |          |  |  |  |  |  |  |  |  |  |     |  |  |  |  |  |  |  |  |  |
|--------------------|--|-------------------------------------|-----------------|-------------------------|------------|-----------------------|-----------|--------------------|----------|-------------------------|------------|-----------------------|-----------|--------------------|-----------------|-------------------------|------------|-----------------------|------------|--------------------|-----------|-------------------------|--------------------|-----------------------|-----------|--------------------|-----------------|-------------------------|------------|-----------------------|-----------|--------------------|----------|-------------------------|----------|-----------------------|--|--|--|--|--|---------------------|--|-----|--|--|--|--|--|--|--|---------------|--|-------|--|----------|--|--|--|--|--|--|--|--|--|-----|--|--|--|--|--|--|--|--|--|
| WELL NAME          |  | H.B. CAMERON HILLS AS-60-10-17-30 W |                 |                         |            |                       |           |                    |          |                         |            | LDG. FLG. TO KB       |           | CASING RECORD      |                 | DEPTH                   | SIZE       | WEIGHT                | GRADE      | CEMENT             | ACID      | PLUG DOWN               | COMPANY SUPERVISOR |                       |           |                    |                 |                         |            |                       |           |                    |          |                         |          |                       |  |  |  |  |  |                     |  |     |  |  |  |  |  |  |  |               |  |       |  |          |  |  |  |  |  |  |  |  |  |     |  |  |  |  |  |  |  |  |  |
| CONTRACTOR         |  | S+T DRILLING                        |                 |                         |            |                       |           |                    |          |                         |            | TYPE RIG              |           |                    |                 | MAT 50 AE               |            |                       |            |                    |           |                         |                    |                       |           | K. B. ELEV.        |                 | 826                     |            | 8 3/4                 | 24        | J 55               | 465      |                         | FEB 1/68 | Cliff J...            |  |  |  |  |  |                     |  |     |  |  |  |  |  |  |  |               |  |       |  |          |  |  |  |  |  |  |  |  |  |     |  |  |  |  |  |  |  |  |  |
| R/G NO.            |  | 1 E                                 |                 |                         |            |                       |           |                    |          |                         |            | TOOL PUSHER           |           |                    |                 | A. STACK                |            |                       |            |                    |           |                         |                    |                       |           | GRD. ELEV.         |                 |                         |            |                       |           |                    |          |                         |          |                       |  |  |  |  |  |                     |  |     |  |  |  |  |  |  |  |               |  |       |  |          |  |  |  |  |  |  |  |  |  |     |  |  |  |  |  |  |  |  |  |
|                    |  | 12 P.M. TO 8 A.M.                   |                 |                         |            |                       |           |                    |          |                         |            | 8 A.M. TO 4 P.M.      |           |                    |                 |                         |            |                       |            |                    |           | 4 P.M. TO 12 P.M.       |                    |                       |           |                    |                 |                         |            |                       |           |                    |          |                         |          |                       |  |  |  |  |  |                     |  |     |  |  |  |  |  |  |  |               |  |       |  |          |  |  |  |  |  |  |  |  |  |     |  |  |  |  |  |  |  |  |  |
| DEPTH              |  | START                               |                 |                         |            |                       |           |                    |          |                         |            | PROGRESS              |           |                    |                 |                         |            |                       |            |                    |           | END                     |                    |                       |           |                    |                 |                         |            |                       |           | START              |          | PROGRESS                |          |                       |  |  |  |  |  |                     |  | END |  |  |  |  |  |  |  |               |  | START |  | PROGRESS |  |  |  |  |  |  |  |  |  | END |  |  |  |  |  |  |  |  |  |
| BIT RECORD         |  | NO.                                 | SERIAL NO.      | TYPE                    | SIZE       | FROM                  | TO        | FOOTAGE            | HRS. RUN | NO.                     | SERIAL NO. | TYPE                  | SIZE      | FROM               | TO              | FOOTAGE                 | HRS. RUN   | NO.                   | SERIAL NO. | TYPE               | SIZE      | FROM                    | TO                 | FOOTAGE               | HRS. RUN  | NO.                | SERIAL NO.      | TYPE                    | SIZE       | FROM                  | TO        | FOOTAGE            | HRS. RUN |                         |          |                       |  |  |  |  |  |                     |  |     |  |  |  |  |  |  |  |               |  |       |  |          |  |  |  |  |  |  |  |  |  |     |  |  |  |  |  |  |  |  |  |
| DRILLING DATA      |  | LINER SIZE                          |                 | PUMP PRESSURE           |            | TABLE SPEED           |           | WEIGHT ON BIT      |          | LINER SIZE              |            | PUMP PRESSURE         |           | TABLE SPEED        |                 | WEIGHT ON BIT           |            | LINER SIZE            |            | PUMP PRESSURE      |           | TABLE SPEED             |                    | WEIGHT ON BIT         |           | LINER SIZE         |                 | PUMP PRESSURE           |            | TABLE SPEED           |           | WEIGHT ON BIT      |          |                         |          |                       |  |  |  |  |  |                     |  |     |  |  |  |  |  |  |  |               |  |       |  |          |  |  |  |  |  |  |  |  |  |     |  |  |  |  |  |  |  |  |  |
| DRILLING STRING    |  | SIZE                                | STANDS          | SINGLES                 | DRILL COL. | KELLY IN              | CORE BBL. | SIZE               | STANDS   | SINGLES                 | DRILL COL. | KELLY IN              | CORE BBL. | SIZE               | STANDS          | SINGLES                 | DRILL COL. | KELLY IN              | CORE BBL.  | SIZE               | STANDS    | SINGLES                 | DRILL COL.         | KELLY IN              | CORE BBL. | SIZE               | STANDS          | SINGLES                 | DRILL COL. | KELLY IN              | CORE BBL. |                    |          |                         |          |                       |  |  |  |  |  |                     |  |     |  |  |  |  |  |  |  |               |  |       |  |          |  |  |  |  |  |  |  |  |  |     |  |  |  |  |  |  |  |  |  |
| MUD RECORD         |  | TYPE OF MUD                         |                 | WEIGHT                  |            | VIS                   |           | WL                 |          | PH                      |            | FC                    |           | TYPE OF MUD        |                 | WEIGHT                  |            | VIS                   |            | WL                 |           | PH                      |                    | FC                    |           | TYPE OF MUD        |                 | WEIGHT                  |            | VIS                   |           | WL                 |          | PH                      |          | FC                    |  |  |  |  |  |                     |  |     |  |  |  |  |  |  |  |               |  |       |  |          |  |  |  |  |  |  |  |  |  |     |  |  |  |  |  |  |  |  |  |
|                    |  |                                     |                 |                         |            |                       |           |                    |          |                         |            |                       |           |                    |                 | 9.9                     |            | 78                    |            | 8.0                |           |                         |                    |                       |           |                    |                 |                         |            |                       |           |                    |          |                         |          |                       |  |  |  |  |  |                     |  |     |  |  |  |  |  |  |  |               |  |       |  |          |  |  |  |  |  |  |  |  |  |     |  |  |  |  |  |  |  |  |  |
| ADDITIVES          |  |                                     |                 |                         |            |                       |           |                    |          |                         |            | ADDITIVES             |           |                    |                 |                         |            |                       |            |                    |           | ADDITIVES               |                    |                       |           |                    |                 |                         |            |                       |           |                    |          |                         |          |                       |  |  |  |  |  |                     |  |     |  |  |  |  |  |  |  |               |  |       |  |          |  |  |  |  |  |  |  |  |  |     |  |  |  |  |  |  |  |  |  |
|                    |  |                                     |                 |                         |            |                       |           |                    |          |                         |            | ADDITIVES             |           |                    |                 |                         |            |                       |            |                    |           | ADDITIVES               |                    |                       |           |                    |                 |                         |            |                       |           |                    |          |                         |          |                       |  |  |  |  |  |                     |  |     |  |  |  |  |  |  |  |               |  |       |  |          |  |  |  |  |  |  |  |  |  |     |  |  |  |  |  |  |  |  |  |
| CORING             |  | NO.                                 | FROM            | TO                      | RECOVERED  | FORMATION             | NO.       | FROM               | TO       | RECOVERED               | FORMATION  | NO.                   | FROM      | TO                 | RECOVERED       | FORMATION               | NO.        | FROM                  | TO         | RECOVERED          | FORMATION |                         |                    |                       |           |                    |                 |                         |            |                       |           |                    |          |                         |          |                       |  |  |  |  |  |                     |  |     |  |  |  |  |  |  |  |               |  |       |  |          |  |  |  |  |  |  |  |  |  |     |  |  |  |  |  |  |  |  |  |
| SURVEY             |  | DEG. AT                             |                 | FT.                     |            | DEG. AT               |           | FT.                |          | DEG. AT                 |            | FT.                   |           | DEG. AT            |                 | FT.                     |            | DEG. AT               |            | FT.                |           | DEG. AT                 |                    | FT.                   |           | DEG. AT            |                 | FT.                     |            | DEG. AT               |           | FT.                |          |                         |          |                       |  |  |  |  |  |                     |  |     |  |  |  |  |  |  |  |               |  |       |  |          |  |  |  |  |  |  |  |  |  |     |  |  |  |  |  |  |  |  |  |
| DRILL STEM TESTS   |  | NO.                                 |                 | INTERVAL                |            | FORMATION             |           | NO.                |          | INTERVAL                |            | FORMATION             |           | NO.                |                 | INTERVAL                |            | FORMATION             |            | NO.                |           | INTERVAL                |                    | FORMATION             |           | NO.                |                 | INTERVAL                |            | FORMATION             |           | NO.                |          | INTERVAL                |          | FORMATION             |  |  |  |  |  |                     |  |     |  |  |  |  |  |  |  |               |  |       |  |          |  |  |  |  |  |  |  |  |  |     |  |  |  |  |  |  |  |  |  |
|                    |  | VALVE OPEN (MINS.)                  |                 | INITIAL SHUT-IN (MINS.) |            | FINAL SHUT-IN (MINS.) |           | VALVE OPEN (MINS.) |          | INITIAL SHUT-IN (MINS.) |            | FINAL SHUT-IN (MINS.) |           | VALVE OPEN (MINS.) |                 | INITIAL SHUT-IN (MINS.) |            | FINAL SHUT-IN (MINS.) |            | VALVE OPEN (MINS.) |           | INITIAL SHUT-IN (MINS.) |                    | FINAL SHUT-IN (MINS.) |           | VALVE OPEN (MINS.) |                 | INITIAL SHUT-IN (MINS.) |            | FINAL SHUT-IN (MINS.) |           | VALVE OPEN (MINS.) |          | INITIAL SHUT-IN (MINS.) |          | FINAL SHUT-IN (MINS.) |  |  |  |  |  |                     |  |     |  |  |  |  |  |  |  |               |  |       |  |          |  |  |  |  |  |  |  |  |  |     |  |  |  |  |  |  |  |  |  |
|                    |  | GAS TO SURFACE                      |                 | MIN. @                  |            | MCF/D MAX.            |           | GAS TO SURFACE     |          | MIN. @                  |            | MCF/D MAX.            |           | GAS TO SURFACE     |                 | MIN. @                  |            | MCF/D MAX.            |            | GAS TO SURFACE     |           | MIN. @                  |                    | MCF/D MAX.            |           | GAS TO SURFACE     |                 | MIN. @                  |            | MCF/D MAX.            |           | GAS TO SURFACE     |          | MIN. @                  |          | MCF/D MAX.            |  |  |  |  |  |                     |  |     |  |  |  |  |  |  |  |               |  |       |  |          |  |  |  |  |  |  |  |  |  |     |  |  |  |  |  |  |  |  |  |
|                    |  | OIL TO SURFACE                      |                 | MIN. @                  |            | BBL/D MAX.            |           | OIL TO SURFACE     |          | MIN. @                  |            | BBL/D MAX.            |           | OIL TO SURFACE     |                 | MIN. @                  |            | BBL/D MAX.            |            | OIL TO SURFACE     |           | MIN. @                  |                    | BBL/D MAX.            |           | OIL TO SURFACE     |                 | MIN. @                  |            | BBL/D MAX.            |           | OIL TO SURFACE     |          | MIN. @                  |          | BBL/D MAX.            |  |  |  |  |  |                     |  |     |  |  |  |  |  |  |  |               |  |       |  |          |  |  |  |  |  |  |  |  |  |     |  |  |  |  |  |  |  |  |  |
| RECOVERY:          |  |                                     |                 |                         |            |                       |           |                    |          |                         |            | RECOVERY:             |           |                    |                 |                         |            |                       |            |                    |           | RECOVERY:               |                    |                       |           |                    |                 |                         |            |                       |           |                    |          |                         |          |                       |  |  |  |  |  |                     |  |     |  |  |  |  |  |  |  |               |  |       |  |          |  |  |  |  |  |  |  |  |  |     |  |  |  |  |  |  |  |  |  |
| PRESSURES (PSI):   |  | HP                                  |                 | FP                      |            | ISIP                  |           | FSIP               |          | HP                      |            | FP                    |           | ISIP               |                 | FSIP                    |            | HP                    |            | FP                 |           | ISIP                    |                    | FSIP                  |           | HP                 |                 | FP                      |            | ISIP                  |           | FSIP               |          |                         |          |                       |  |  |  |  |  |                     |  |     |  |  |  |  |  |  |  |               |  |       |  |          |  |  |  |  |  |  |  |  |  |     |  |  |  |  |  |  |  |  |  |
| REMARKS INCLUDING: |  | FROM                                | TO              | DESCRIPTION OF WORK     |            |                       |           |                    |          |                         |            |                       |           | FROM               | TO              | DESCRIPTION OF WORK     |            |                       |            |                    |           |                         |                    |                       |           | FROM               | TO              | DESCRIPTION OF WORK     |            |                       |           |                    |          |                         |          |                       |  |  |  |  |  |                     |  |     |  |  |  |  |  |  |  |               |  |       |  |          |  |  |  |  |  |  |  |  |  |     |  |  |  |  |  |  |  |  |  |
| CEMENTING          |  | 12 <sup>00</sup>                    | 8 <sup>00</sup> | CIRC - WAIT ON ORDERS   |            |                       |           |                    |          |                         |            |                       |           | 8 <sup>00</sup>    | 4 <sup>00</sup> | Circ wait on orders     |            |                       |            |                    |           |                         |                    |                       |           | 4 <sup>00</sup>    | 7 <sup>00</sup> | WAIT ON ORDERS          |            |                       |           |                    |          |                         |          |                       |  |  |  |  |  |                     |  |     |  |  |  |  |  |  |  |               |  |       |  |          |  |  |  |  |  |  |  |  |  |     |  |  |  |  |  |  |  |  |  |
| LOGGING            |  |                                     |                 |                         |            |                       |           |                    |          |                         |            |                       |           |                    |                 |                         |            |                       |            |                    |           |                         |                    |                       |           |                    |                 |                         |            |                       |           |                    |          |                         |          |                       |  |  |  |  |  |                     |  |     |  |  |  |  |  |  |  |               |  |       |  |          |  |  |  |  |  |  |  |  |  |     |  |  |  |  |  |  |  |  |  |
| PERFORATING        |  |                                     |                 |                         |            |                       |           |                    |          |                         |            |                       |           |                    |                 |                         |            |                       |            |                    |           |                         |                    |                       |           |                    |                 |                         |            |                       |           |                    |          |                         |          |                       |  |  |  |  |  |                     |  |     |  |  |  |  |  |  |  |               |  |       |  |          |  |  |  |  |  |  |  |  |  |     |  |  |  |  |  |  |  |  |  |
| ACIDIZING          |  |                                     |                 |                         |            |                       |           |                    |          |                         |            |                       |           |                    |                 |                         |            |                       |            |                    |           |                         |                    |                       |           |                    |                 |                         |            |                       |           |                    |          |                         |          |                       |  |  |  |  |  |                     |  |     |  |  |  |  |  |  |  |               |  |       |  |          |  |  |  |  |  |  |  |  |  |     |  |  |  |  |  |  |  |  |  |
| FRACTURING         |  |                                     |                 |                         |            |                       |           |                    |          |                         |            |                       |           |                    |                 |                         |            |                       |            |                    |           |                         |                    |                       |           |                    |                 |                         |            |                       |           |                    |          |                         |          |                       |  |  |  |  |  |                     |  |     |  |  |  |  |  |  |  |               |  |       |  |          |  |  |  |  |  |  |  |  |  |     |  |  |  |  |  |  |  |  |  |
| PLUGS              |  |                                     |                 |                         |            |                       |           |                    |          |                         |            |                       |           |                    |                 |                         |            |                       |            |                    |           |                         |                    |                       |           |                    |                 |                         |            |                       |           |                    |          |                         |          |                       |  |  |  |  |  |                     |  |     |  |  |  |  |  |  |  |               |  |       |  |          |  |  |  |  |  |  |  |  |  |     |  |  |  |  |  |  |  |  |  |
|                    |  | DRILLER B. Armstrong                |                 |                         |            |                       |           |                    |          |                         |            | NO. HELPERS 4         |           |                    |                 |                         |            |                       |            |                    |           | DRILLER A. C. ...       |                    |                       |           |                    |                 |                         |            |                       |           | NO. HELPERS 4      |          |                         |          |                       |  |  |  |  |  | DRILLER M. Salas... |  |     |  |  |  |  |  |  |  | NO. HELPERS 4 |  |       |  |          |  |  |  |  |  |  |  |  |  |     |  |  |  |  |  |  |  |  |  |

DATE Feb 22 / 68

|                                                       |  |  |  |  |  |  |  |  |  |                                                                                                    |  |  |  |  |               |  |       |      |        |                                                                      |              |           |             |                    |  |                 |  |  |  |                                                                  |  |  |  |  |  |  |  |  |  |                            |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
|-------------------------------------------------------|--|--|--|--|--|--|--|--|--|----------------------------------------------------------------------------------------------------|--|--|--|--|---------------|--|-------|------|--------|----------------------------------------------------------------------|--------------|-----------|-------------|--------------------|--|-----------------|--|--|--|------------------------------------------------------------------|--|--|--|--|--|--|--|--|--|----------------------------|--|--|--|--|--|--|--|--|--|----------------------|--|--|--|--|--|--|--|--|--|
| WELL NAME <u>H. B. CAMERON HILLS AS-60-10-117-30W</u> |  |  |  |  |  |  |  |  |  | LDG. FLG. TO KB                                                                                    |  |  |  |  | CASING RECORD |  | DEPTH | SIZE | WEIGHT | GRADE                                                                | CEMENT       | ACID      | PLUG DOWN   | COMPANY SUPERVISOR |  |                 |  |  |  |                                                                  |  |  |  |  |  |  |  |  |  |                            |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
| CONTRACTOR <u>S+T DRILLING</u>                        |  |  |  |  |  |  |  |  |  | TYPE RIG <u>NAT. 50 AE</u>                                                                         |  |  |  |  | K. B. ELEV.   |  |       |      |        | <u>826</u>                                                           | <u>8 3/8</u> | <u>24</u> | <u>J-55</u> | <u>465</u>         |  | <u>FEB 1/68</u> |  |  |  |                                                                  |  |  |  |  |  |  |  |  |  |                            |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
| RIG NO. <u>1E</u>                                     |  |  |  |  |  |  |  |  |  | TOOL PUSHER                                                                                        |  |  |  |  | GRD. ELEV.    |  |       |      |        |                                                                      |              |           |             |                    |  |                 |  |  |  |                                                                  |  |  |  |  |  |  |  |  |  |                            |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
| 12 P.M. TO 8 A.M.                                     |  |  |  |  |  |  |  |  |  | 8 A.M. TO 4 P.M.                                                                                   |  |  |  |  |               |  |       |      |        | 4 P.M. TO 12 P.M.                                                    |              |           |             |                    |  |                 |  |  |  |                                                                  |  |  |  |  |  |  |  |  |  |                            |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
| DEPTH                                                 |  |  |  |  |  |  |  |  |  | START <u>4969</u> PROGRESS END <u>4969</u>                                                         |  |  |  |  |               |  |       |      |        | START <u>4969</u> PROGRESS END                                       |              |           |             |                    |  |                 |  |  |  | START PROGRESS END                                               |  |  |  |  |  |  |  |  |  |                            |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
| BIT RECORD                                            |  |  |  |  |  |  |  |  |  | NO. SERIAL NO. TYPE SIZE FROM TO FOOTAGE HRS. RUN                                                  |  |  |  |  |               |  |       |      |        | NO. SERIAL NO. TYPE SIZE FROM TO FOOTAGE HRS. RUN                    |              |           |             |                    |  |                 |  |  |  | NO. SERIAL NO. TYPE SIZE FROM TO FOOTAGE HRS. RUN                |  |  |  |  |  |  |  |  |  |                            |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
|                                                       |  |  |  |  |  |  |  |  |  | <u>17</u> <u>XD 540</u> <u>WD 75 7/8</u> <u>4956</u> <u>4969</u> <u>13</u> <u>4 3/4</u>            |  |  |  |  |               |  |       |      |        |                                                                      |              |           |             |                    |  |                 |  |  |  |                                                                  |  |  |  |  |  |  |  |  |  |                            |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
| DRILLING DATA                                         |  |  |  |  |  |  |  |  |  | LINER SIZE <u>5 1/2 x 14</u> PUMP PRESSURE TABLE SPEED WEIGHT ON BIT                               |  |  |  |  |               |  |       |      |        | LINER SIZE <u>5 1/2 x 14</u> PUMP PRESSURE TABLE SPEED WEIGHT ON BIT |              |           |             |                    |  |                 |  |  |  | LINER SIZE PUMP PRESSURE TABLE SPEED WEIGHT ON BIT               |  |  |  |  |  |  |  |  |  |                            |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
| DRILLING STRING                                       |  |  |  |  |  |  |  |  |  | SIZE STANDS SINGLES DRILL COL. KELLY IN CORE BBL.                                                  |  |  |  |  |               |  |       |      |        | SIZE STANDS SINGLES DRILL COL. KELLY IN CORE BBL.                    |              |           |             |                    |  |                 |  |  |  | SIZE STANDS SINGLES DRILL COL. KELLY IN CORE BBL.                |  |  |  |  |  |  |  |  |  |                            |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
| MUD RECORD                                            |  |  |  |  |  |  |  |  |  | TYPE OF MUD <u>Gyp</u> WEIGHT <u>9.9</u> VIS <u>88</u> WL <u>7.8</u> PH <u>8.0</u> FC <u>2 1/2</u> |  |  |  |  |               |  |       |      |        | TYPE OF MUD WEIGHT VIS WL PH FC                                      |              |           |             |                    |  |                 |  |  |  | TYPE OF MUD WEIGHT VIS WL PH FC                                  |  |  |  |  |  |  |  |  |  |                            |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
|                                                       |  |  |  |  |  |  |  |  |  | ADDITIVES                                                                                          |  |  |  |  |               |  |       |      |        | ADDITIVES                                                            |              |           |             |                    |  |                 |  |  |  | ADDITIVES                                                        |  |  |  |  |  |  |  |  |  |                            |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
| CORING                                                |  |  |  |  |  |  |  |  |  | NO. FROM TO RECOVERED FORMATION                                                                    |  |  |  |  |               |  |       |      |        | NO. FROM TO RECOVERED FORMATION                                      |              |           |             |                    |  |                 |  |  |  | NO. FROM TO RECOVERED FORMATION                                  |  |  |  |  |  |  |  |  |  |                            |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
| SURVEY                                                |  |  |  |  |  |  |  |  |  | DEG. AT FT. DEG. AT FT. DEG. AT FT.                                                                |  |  |  |  |               |  |       |      |        | DEG. AT FT. DEG. AT FT. DEG. AT FT.                                  |              |           |             |                    |  |                 |  |  |  | DEG. AT FT. DEG. AT FT. DEG. AT FT.                              |  |  |  |  |  |  |  |  |  |                            |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
| DRILL STEM TESTS                                      |  |  |  |  |  |  |  |  |  | NO. INTERVAL FORMATION                                                                             |  |  |  |  |               |  |       |      |        | NO. INTERVAL FORMATION                                               |              |           |             |                    |  |                 |  |  |  | NO. INTERVAL FORMATION                                           |  |  |  |  |  |  |  |  |  |                            |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
|                                                       |  |  |  |  |  |  |  |  |  | VALVE OPEN (MINS.) INITIAL SHUT-IN (MINS.) FINAL SHUT-IN (MINS.)                                   |  |  |  |  |               |  |       |      |        | VALVE OPEN (MINS.) INITIAL SHUT-IN (MINS.) FINAL SHUT-IN (MINS.)     |              |           |             |                    |  |                 |  |  |  | VALVE OPEN (MINS.) INITIAL SHUT-IN (MINS.) FINAL SHUT-IN (MINS.) |  |  |  |  |  |  |  |  |  |                            |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
|                                                       |  |  |  |  |  |  |  |  |  | GAS TO SURFACE MIN. @ MCF/D MAX.                                                                   |  |  |  |  |               |  |       |      |        | GAS TO SURFACE MIN. @ MCF/D MAX.                                     |              |           |             |                    |  |                 |  |  |  | GAS TO SURFACE MIN. @ MCF/D MAX.                                 |  |  |  |  |  |  |  |  |  |                            |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
|                                                       |  |  |  |  |  |  |  |  |  | OIL TO SURFACE MIN. @ BBL/D MAX.                                                                   |  |  |  |  |               |  |       |      |        | OIL TO SURFACE MIN. @ BBL/D MAX.                                     |              |           |             |                    |  |                 |  |  |  | OIL TO SURFACE MIN. @ BBL/D MAX.                                 |  |  |  |  |  |  |  |  |  |                            |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
|                                                       |  |  |  |  |  |  |  |  |  | RECOVERY:                                                                                          |  |  |  |  |               |  |       |      |        | RECOVERY:                                                            |              |           |             |                    |  |                 |  |  |  | RECOVERY:                                                        |  |  |  |  |  |  |  |  |  |                            |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
|                                                       |  |  |  |  |  |  |  |  |  | PRESSURES (PSI): HP FP ISIP FSIP                                                                   |  |  |  |  |               |  |       |      |        | PRESSURES (PSI): HP FP ISIP FSIP                                     |              |           |             |                    |  |                 |  |  |  | PRESSURES (PSI): HP FP ISIP FSIP                                 |  |  |  |  |  |  |  |  |  |                            |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
| REMARKS INCLUDING:                                    |  |  |  |  |  |  |  |  |  | FROM TO DESCRIPTION OF WORK                                                                        |  |  |  |  |               |  |       |      |        | FROM TO DESCRIPTION OF WORK                                          |              |           |             |                    |  |                 |  |  |  | FROM TO DESCRIPTION OF WORK                                      |  |  |  |  |  |  |  |  |  |                            |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
|                                                       |  |  |  |  |  |  |  |  |  | <u>12:00</u> <u>1:30</u> <u>CIRCULATE</u>                                                          |  |  |  |  |               |  |       |      |        | <u>8:00</u> <u>LOGGING W/ SCHLUMBERGER</u>                           |              |           |             |                    |  |                 |  |  |  | <u>4:00</u> <u>4:15</u> <u>Rig Service</u>                       |  |  |  |  |  |  |  |  |  |                            |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
|                                                       |  |  |  |  |  |  |  |  |  | <u>1:30</u> <u>3:00</u> <u>TRIP OUT To log</u>                                                     |  |  |  |  |               |  |       |      |        | <u>4:15</u> <u>4:45</u> <u>&amp; TEAR OUT SAME</u>                   |              |           |             |                    |  |                 |  |  |  | <u>4:15</u> <u>5:45</u> <u>Rules In &amp; Out</u>                |  |  |  |  |  |  |  |  |  |                            |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
|                                                       |  |  |  |  |  |  |  |  |  | <u>3:00</u> <u>3:30</u> <u>LAY DOWN CORE BBL</u>                                                   |  |  |  |  |               |  |       |      |        |                                                                      |              |           |             |                    |  |                 |  |  |  | <u>5:45</u> <u>10:00</u> <u>Core + wait on order</u>             |  |  |  |  |  |  |  |  |  |                            |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
|                                                       |  |  |  |  |  |  |  |  |  | <u>3:30</u> <u>3:45</u> <u>Rig Up To log</u>                                                       |  |  |  |  |               |  |       |      |        |                                                                      |              |           |             |                    |  |                 |  |  |  | <u>pending completion of well</u>                                |  |  |  |  |  |  |  |  |  |                            |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
|                                                       |  |  |  |  |  |  |  |  |  | <u>3:45</u> <u>8:00</u> <u>LOGGING W/ SCHLUMBERGER</u>                                             |  |  |  |  |               |  |       |      |        |                                                                      |              |           |             |                    |  |                 |  |  |  |                                                                  |  |  |  |  |  |  |  |  |  |                            |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
| DRILLER <u>W. Salazar</u>                             |  |  |  |  |  |  |  |  |  | NO. HELPERS <u>1</u>                                                                               |  |  |  |  |               |  |       |      |        | DRILLER <u>B. Armstrong</u>                                          |              |           |             |                    |  |                 |  |  |  | NO. HELPERS <u>4</u>                                             |  |  |  |  |  |  |  |  |  | DRILLER <u>M. Williams</u> |  |  |  |  |  |  |  |  |  | NO. HELPERS <u>4</u> |  |  |  |  |  |  |  |  |  |

DATE FEBRUARY 2

|                                                                             |  |                                                                  |  |  |  |  |  |  |  |  |  |                                                                  |  |               |  |       |      |        |         |        |      |                                                                  |                    |                   |            |             |  |  |  |  |  |  |  |  |  |
|-----------------------------------------------------------------------------|--|------------------------------------------------------------------|--|--|--|--|--|--|--|--|--|------------------------------------------------------------------|--|---------------|--|-------|------|--------|---------|--------|------|------------------------------------------------------------------|--------------------|-------------------|------------|-------------|--|--|--|--|--|--|--|--|--|
| WELL NAME                                                                   |  | H.B. CAPRICORN HILLS AS-60-10-117-30W                            |  |  |  |  |  |  |  |  |  | LDG. FLG. TO KB                                                  |  | CASING RECORD |  | DEPTH | SIZE | WEIGHT | GRADE   | CEMENT | AC'D | PLUG DOWN                                                        | COMPANY SUPERVISOR |                   |            |             |  |  |  |  |  |  |  |  |  |
| CONTRACTOR                                                                  |  | SST DRILLING Co. TYPE RIG NATIONAL JOAE                          |  |  |  |  |  |  |  |  |  | K. B. ELEV.                                                      |  | 826           |  | 8 3/4 | 24   | J-55   | 4655SAS |        |      |                                                                  | Feb/68             |                   | Cliff J... |             |  |  |  |  |  |  |  |  |  |
| RIG NO.                                                                     |  | IF TOOL PUSHER                                                   |  |  |  |  |  |  |  |  |  | GRD. ELEV.                                                       |  |               |  |       |      |        |         |        |      |                                                                  |                    |                   |            |             |  |  |  |  |  |  |  |  |  |
| 12 P.M. TO 8 A.M.                                                           |  |                                                                  |  |  |  |  |  |  |  |  |  | 8 A.M. TO 4 P.M.                                                 |  |               |  |       |      |        |         |        |      |                                                                  |                    | 4 P.M. TO 12 P.M. |            |             |  |  |  |  |  |  |  |  |  |
| DEPTH                                                                       |  | START 4909 PROGRESS 28' END 4937                                 |  |  |  |  |  |  |  |  |  | START 4937 PROGRESS 19' END 4956                                 |  |               |  |       |      |        |         |        |      | START 4956 PROGRESS 13' END 4969                                 |                    |                   |            |             |  |  |  |  |  |  |  |  |  |
| BIT RECORD                                                                  |  | NO. SERIAL NO. TYPE SIZE FROM TO FOOTAGE HRS. RUN                |  |  |  |  |  |  |  |  |  | NO. SERIAL NO. TYPE SIZE FROM TO FOOTAGE HRS. RUN                |  |               |  |       |      |        |         |        |      | NO. SERIAL NO. TYPE SIZE FROM TO FOOTAGE HRS. RUN                |                    |                   |            |             |  |  |  |  |  |  |  |  |  |
|                                                                             |  | 908654 M41G 7 7/8 4909 4937 28 2 3/4 REAMING                     |  |  |  |  |  |  |  |  |  | 16 908654 M41G 7 7/8 4909 4956 47 1 1/2                          |  |               |  |       |      |        |         |        |      | 17 70540 WD7 7 7/8 4956 4969 13' 4 3/4                           |                    |                   |            |             |  |  |  |  |  |  |  |  |  |
| DRILLING DATA                                                               |  | LINER SIZE PUMP PRESSURE TABLE SPEED WEIGHT ON BIT               |  |  |  |  |  |  |  |  |  | LINER SIZE PUMP PRESSURE TABLE SPEED WEIGHT ON BIT               |  |               |  |       |      |        |         |        |      | LINER SIZE PUMP PRESSURE TABLE SPEED WEIGHT ON BIT               |                    |                   |            |             |  |  |  |  |  |  |  |  |  |
|                                                                             |  | 5 1/2 x 14 1300 55 25m                                           |  |  |  |  |  |  |  |  |  | 5 1/2 x 14 1300 55 - 80 25m - 38m                                |  |               |  |       |      |        |         |        |      | 5 1/2 x 14 1250 70 36m                                           |                    |                   |            |             |  |  |  |  |  |  |  |  |  |
| DRILLING STRING                                                             |  | SIZE STANDS SINGLES DRILL COL. KELLY IN CORE BBL.                |  |  |  |  |  |  |  |  |  | SIZE STANDS SINGLES DRILL COL. KELLY IN CORE BBL.                |  |               |  |       |      |        |         |        |      | SIZE STANDS SINGLES DRILL COL. KELLY IN CORE BBL.                |                    |                   |            |             |  |  |  |  |  |  |  |  |  |
|                                                                             |  | 4 45 23                                                          |  |  |  |  |  |  |  |  |  | 4 45 1 23 27.50                                                  |  |               |  |       |      |        |         |        |      | 4 45 1 23 40.50                                                  |                    |                   |            |             |  |  |  |  |  |  |  |  |  |
| MUD RECORD                                                                  |  | TYPE OF MUD WEIGHT VIS WL PH FC                                  |  |  |  |  |  |  |  |  |  | TYPE OF MUD WEIGHT VIS WL PH FC                                  |  |               |  |       |      |        |         |        |      | TYPE OF MUD WEIGHT VIS WL PH FC                                  |                    |                   |            |             |  |  |  |  |  |  |  |  |  |
|                                                                             |  | GYP 10.0 80 7.6 8.0 9/32                                         |  |  |  |  |  |  |  |  |  | GYP 10.0 80 7.2 8.0                                              |  |               |  |       |      |        |         |        |      | GYP 9.9 88 7.8 8.0 1/32                                          |                    |                   |            |             |  |  |  |  |  |  |  |  |  |
|                                                                             |  | ADDITIVES Gel - 400 #                                            |  |  |  |  |  |  |  |  |  | ADDITIVES GEL - 200 # PRESERVATIVE - 1000                        |  |               |  |       |      |        |         |        |      | ADDITIVES Gel 600 #                                              |                    |                   |            |             |  |  |  |  |  |  |  |  |  |
| CORING                                                                      |  | NO. FROM TO RECOVERED FORMATION                                  |  |  |  |  |  |  |  |  |  | NO. FROM TO RECOVERED FORMATION                                  |  |               |  |       |      |        |         |        |      | NO. FROM TO RECOVERED FORMATION                                  |                    |                   |            |             |  |  |  |  |  |  |  |  |  |
| SURVEY                                                                      |  | DEG. AT FT. DEG. AT FT. DEG. AT FT.                              |  |  |  |  |  |  |  |  |  | DEG. AT FT. DEG. AT FT. DEG. AT FT.                              |  |               |  |       |      |        |         |        |      | DEG. AT FT. DEG. AT FT. DEG. AT FT.                              |                    |                   |            |             |  |  |  |  |  |  |  |  |  |
| DRILL STEM TESTS                                                            |  | NO. INTERVAL FORMATION                                           |  |  |  |  |  |  |  |  |  | NO. INTERVAL FORMATION                                           |  |               |  |       |      |        |         |        |      | NO. INTERVAL FORMATION                                           |                    |                   |            |             |  |  |  |  |  |  |  |  |  |
|                                                                             |  | VALVE OPEN (MINS.) INITIAL SHUT-IN (MINS.) FINAL SHUT-IN (MINS.) |  |  |  |  |  |  |  |  |  | VALVE OPEN (MINS.) INITIAL SHUT-IN (MINS.) FINAL SHUT-IN (MINS.) |  |               |  |       |      |        |         |        |      | VALVE OPEN (MINS.) INITIAL SHUT-IN (MINS.) FINAL SHUT-IN (MINS.) |                    |                   |            |             |  |  |  |  |  |  |  |  |  |
|                                                                             |  | GAS TO SURFACE MIN. @ MCF/D MAX.                                 |  |  |  |  |  |  |  |  |  | GAS TO SURFACE MIN. @ MCF/D MAX.                                 |  |               |  |       |      |        |         |        |      | GAS TO SURFACE MIN. @ MCF/D MAX.                                 |                    |                   |            |             |  |  |  |  |  |  |  |  |  |
|                                                                             |  | OIL TO SURFACE MIN. @ BBL/D MAX.                                 |  |  |  |  |  |  |  |  |  | OIL TO SURFACE MIN. @ BBL/D MAX.                                 |  |               |  |       |      |        |         |        |      | OIL TO SURFACE MIN. @ BBL/D MAX.                                 |                    |                   |            |             |  |  |  |  |  |  |  |  |  |
|                                                                             |  | RECOVERY:                                                        |  |  |  |  |  |  |  |  |  | RECOVERY:                                                        |  |               |  |       |      |        |         |        |      | RECOVERY:                                                        |                    |                   |            |             |  |  |  |  |  |  |  |  |  |
|                                                                             |  | PRESSURES (PSI): HP FP ISIP FSIP                                 |  |  |  |  |  |  |  |  |  | PRESSURES (PSI): HP FP ISIP FSIP                                 |  |               |  |       |      |        |         |        |      | PRESSURES (PSI): HP FP ISIP FSIP                                 |                    |                   |            |             |  |  |  |  |  |  |  |  |  |
| REMARKS INCLUDING: CEMENTING LOGGING PERFORATING ACIDIZING FRACTURING PLUGS |  | FROM TO DESCRIPTION OF WORK                                      |  |  |  |  |  |  |  |  |  | FROM TO DESCRIPTION OF WORK                                      |  |               |  |       |      |        |         |        |      | FROM TO DESCRIPTION OF WORK                                      |                    |                   |            |             |  |  |  |  |  |  |  |  |  |
|                                                                             |  | 12 00 130 HOISTING CORE BBL                                      |  |  |  |  |  |  |  |  |  | 8 00 8 15 RIG SERVICE - U BOPS + KELLY COCK                      |  |               |  |       |      |        |         |        |      | 4 00 4 15 RIG SERVICE                                            |                    |                   |            |             |  |  |  |  |  |  |  |  |  |
|                                                                             |  | 130 145 RIG SERVICE - V BLIND RAMS                               |  |  |  |  |  |  |  |  |  | 8 15 1030 REAMING 6 3/16 HOLE TO 7 7/8                           |  |               |  |       |      |        |         |        |      | 4 15 500 WAIT ON ORDERS                                          |                    |                   |            |             |  |  |  |  |  |  |  |  |  |
|                                                                             |  | 145 RECOVER CORE - BOX SAME - SERVICE                            |  |  |  |  |  |  |  |  |  | 1030 1 00 DRILL 7 7/8 HOLE                                       |  |               |  |       |      |        |         |        |      | 5 00 6 30 RUN IN 2 1/2" LIFT #17                                 |                    |                   |            |             |  |  |  |  |  |  |  |  |  |
|                                                                             |  | 3 00 3 30 CORE BBL & STAND BACK                                  |  |  |  |  |  |  |  |  |  | 1 00 3 30 HOIST FOR BIT                                          |  |               |  |       |      |        |         |        |      | 6 30 7 15 REAM 5' UNDER GUAGE HOLE                               |                    |                   |            |             |  |  |  |  |  |  |  |  |  |
|                                                                             |  | 3 30 515 SLIP 23' OF DRILL LINE - CUT TO                         |  |  |  |  |  |  |  |  |  | 3 30 4 00 WAIT ON ORDERS                                         |  |               |  |       |      |        |         |        |      | 7 15 1200 DRILL 7 7/8 HOLE                                       |                    |                   |            |             |  |  |  |  |  |  |  |  |  |
|                                                                             |  | 3 30 RUN IN 4" BIT #16 CLEAN 15' ABOVE                           |  |  |  |  |  |  |  |  |  |                                                                  |  |               |  |       |      |        |         |        |      |                                                                  |                    |                   |            |             |  |  |  |  |  |  |  |  |  |
|                                                                             |  | 515 8 00 RIG HOLE                                                |  |  |  |  |  |  |  |  |  |                                                                  |  |               |  |       |      |        |         |        |      |                                                                  |                    |                   |            |             |  |  |  |  |  |  |  |  |  |
|                                                                             |  | 515 8 00 REAMING 6 3/16 HOLE TO 7 7/8                            |  |  |  |  |  |  |  |  |  |                                                                  |  |               |  |       |      |        |         |        |      |                                                                  |                    |                   |            |             |  |  |  |  |  |  |  |  |  |
| DRILLER                                                                     |  | NO. HELPERS                                                      |  |  |  |  |  |  |  |  |  | DRILLER                                                          |  | NO. HELPERS   |  |       |      |        |         |        |      |                                                                  |                    | DRILLER           |            | NO. HELPERS |  |  |  |  |  |  |  |  |  |
|                                                                             |  | C. J. Alcantara 4                                                |  |  |  |  |  |  |  |  |  | B. Armstrong                                                     |  | 4             |  |       |      |        |         |        |      |                                                                  |                    | M. J. Plinius     |            | 4           |  |  |  |  |  |  |  |  |  |



## DAILY DRILLERS REPORT

Hudson's Bay Oil and Gas Company Limited

DATE February 20/68

| WELL NAME                                                                                     |  | LDG. FLG. TO KB    |            | CASING RECORD | DEPTH  | SIZE                              | WEIGHT | GRADE         | CEMENT   | ACID                  | PLUG DOWN  | COMPANY SUPERVISOR                 |                                |                    |      |               |          |                         |            |               |      |                       |      |                     |          |                   |  |           |  |           |  |     |  |    |  |    |  |  |
|-----------------------------------------------------------------------------------------------|--|--------------------|------------|---------------|--------|-----------------------------------|--------|---------------|----------|-----------------------|------------|------------------------------------|--------------------------------|--------------------|------|---------------|----------|-------------------------|------------|---------------|------|-----------------------|------|---------------------|----------|-------------------|--|-----------|--|-----------|--|-----|--|----|--|----|--|--|
| CONTRACTOR                                                                                    |  | K. B. ELEV.        |            |               | 826    | 8 3/8                             | 24     | J-55          | 465 cwt  |                       | Feb 1/68   |                                    |                                |                    |      |               |          |                         |            |               |      |                       |      |                     |          |                   |  |           |  |           |  |     |  |    |  |    |  |  |
| RIG NO.                                                                                       |  | TOOL PUSHER        |            | GRD. ELEV.    |        |                                   |        |               |          |                       |            |                                    |                                |                    |      |               |          |                         |            |               |      |                       |      |                     |          |                   |  |           |  |           |  |     |  |    |  |    |  |  |
| 12 P.M. TO 8 A.M.                                                                             |  |                    |            |               |        |                                   |        |               |          |                       |            |                                    | 8 A.M. TO 4 P.M.               |                    |      |               |          |                         |            |               |      |                       |      |                     |          | 4 P.M. TO 12 P.M. |  |           |  |           |  |     |  |    |  |    |  |  |
| DEPTH                                                                                         |  | START              |            | PROGRESS      |        | END                               |        | START         |          | PROGRESS              |            | END                                |                                | START              |      | PROGRESS      |          | END                     |            | START         |      | PROGRESS              |      | END                 |          |                   |  |           |  |           |  |     |  |    |  |    |  |  |
| BIT RECORD                                                                                    |  | NO.                | SERIAL NO. | TYPE          | SIZE   | FROM                              | TO     | FOOTAGE       | HRS. RUN | NO.                   | SERIAL NO. | TYPE                               | SIZE                           | FROM               | TO   | FOOTAGE       | HRS. RUN | NO.                     | SERIAL NO. | TYPE          | SIZE | FROM                  | TO   | FOOTAGE             | HRS. RUN |                   |  |           |  |           |  |     |  |    |  |    |  |  |
|                                                                                               |  | 15                 | 0568       | ◇             | 6 3/16 | 4909                              |        |               |          | 15                    | 0568       | ◇                                  | 6 3/16                         | 4909               | 4925 | 16            | 5        |                         | 15         | 0568          | ◇    | 6 3/16                | 4909 | 4949                | 40       | 12 1/2            |  |           |  |           |  |     |  |    |  |    |  |  |
| DRILLING DATA                                                                                 |  | LINER SIZE         |            | PUMP PRESSURE |        | TABLE SPEED                       |        | WEIGHT ON BIT |          | LINER SIZE            |            | PUMP PRESSURE                      |                                | TABLE SPEED        |      | WEIGHT ON BIT |          | LINER SIZE              |            | PUMP PRESSURE |      | TABLE SPEED           |      | WEIGHT ON BIT       |          |                   |  |           |  |           |  |     |  |    |  |    |  |  |
|                                                                                               |  | 5 1/2 x 14         |            |               |        |                                   |        |               |          | 5 1/2 x 14            |            | 800                                |                                | 80                 |      | 12 m          |          | 5 1/2 x 14              |            | 750           |      | 80                    |      | 12 m                |          |                   |  |           |  |           |  |     |  |    |  |    |  |  |
| DRILLING STRING                                                                               |  | SIZE               |            | STANDS        |        | SINGLES                           |        | DRILL COL.    |          | KELLY IN              |            | CORE BBL.                          |                                | SIZE               |      | STANDS        |          | SINGLES                 |            | DRILL COL.    |      | KELLY IN              |      | CORE BBL.           |          |                   |  |           |  |           |  |     |  |    |  |    |  |  |
|                                                                                               |  | 4                  |            |               |        |                                   |        |               |          | 4                     |            | 44                                 |                                | 23                 |      | 17.39         |          | 73.35                   |            | 4             |      | 44                    |      | 2                   |          | 23                |  | 10        |  | 73        |  |     |  |    |  |    |  |  |
| MUD RECORD                                                                                    |  | TYPE OF MUD        |            | WEIGHT        |        | VIS                               |        | WL            |          | PH                    |            | FC                                 |                                | TYPE OF MUD        |      | WEIGHT        |          | VIS                     |            | WL            |      | PH                    |      | FC                  |          | TYPE OF MUD       |  | WEIGHT    |  | VIS       |  | WL  |  | PH |  | FC |  |  |
|                                                                                               |  | GYP                |            |               |        |                                   |        |               |          |                       |            |                                    |                                | GYP                |      | 9.9           |          | 60                      |            | 7.5           |      |                       |      |                     |          | GYP               |  | 9.9       |  | 70        |  | 7.6 |  |    |  |    |  |  |
| ADDITIVES                                                                                     |  |                    |            |               |        |                                   |        |               |          |                       |            |                                    | ADDITIVES PRESERVATIVE - 100 # |                    |      |               |          |                         |            |               |      |                       |      |                     |          |                   |  |           |  |           |  |     |  |    |  |    |  |  |
| CORING                                                                                        |  | NO.                |            | FROM          |        | TO                                |        | RECOVERED     |          | FORMATION             |            | NO.                                |                                | FROM               |      | TO            |          | RECOVERED               |            | FORMATION     |      | NO.                   |      | FROM                |          | TO                |  | RECOVERED |  | FORMATION |  |     |  |    |  |    |  |  |
|                                                                                               |  |                    |            |               |        |                                   |        |               |          |                       |            | 4                                  |                                | 4909               |      |               |          |                         |            |               |      | 4                     |      | 4909                |          |                   |  |           |  |           |  |     |  |    |  |    |  |  |
| SURVEY                                                                                        |  | DEG. AT            |            | FT.           |        | DEG. AT                           |        | FT.           |          | DEG. AT               |            | FT.                                |                                | DEG. AT            |      | FT.           |          | DEG. AT                 |            | FT.           |      | DEG. AT               |      | FT.                 |          | DEG. AT           |  | FT.       |  | DEG. AT   |  | FT. |  |    |  |    |  |  |
| DRILL STEM TESTS                                                                              |  | NO.                |            | INTERVAL      |        | FORMATION                         |        | NO.           |          | INTERVAL              |            | FORMATION                          |                                | NO.                |      | INTERVAL      |          | FORMATION               |            | NO.           |      | INTERVAL              |      | FORMATION           |          |                   |  |           |  |           |  |     |  |    |  |    |  |  |
|                                                                                               |  | 5                  |            | 48' 76        |        | 4909 Key River                    |        |               |          |                       |            |                                    |                                |                    |      |               |          |                         |            |               |      |                       |      |                     |          |                   |  |           |  |           |  |     |  |    |  |    |  |  |
|                                                                                               |  | VALVE OPEN (MINS.) |            | 60            |        | INITIAL SHUT-IN (MINS.)           |        | 30            |          | FINAL SHUT-IN (MINS.) |            | 30                                 |                                | VALVE OPEN (MINS.) |      |               |          | INITIAL SHUT-IN (MINS.) |            |               |      | FINAL SHUT-IN (MINS.) |      |                     |          |                   |  |           |  |           |  |     |  |    |  |    |  |  |
|                                                                                               |  | GAS TO SURFACE     |            | 3             |        | MIN. @                            |        | 5000          |          | MCF/D MAX.            |            |                                    |                                | GAS TO SURFACE     |      |               |          | MIN. @                  |            |               |      | MCF/D MAX.            |      |                     |          |                   |  |           |  |           |  |     |  |    |  |    |  |  |
|                                                                                               |  | OIL TO SURFACE     |            |               |        | MIN. @                            |        |               |          | BBL/D MAX.            |            |                                    |                                | OIL TO SURFACE     |      |               |          | MIN. @                  |            |               |      | BBL/D MAX.            |      |                     |          |                   |  |           |  |           |  |     |  |    |  |    |  |  |
|                                                                                               |  | RECOVERY:          |            | 110           |        |                                   |        |               |          |                       |            |                                    |                                | RECOVERY:          |      |               |          |                         |            |               |      |                       |      |                     |          |                   |  |           |  |           |  |     |  |    |  |    |  |  |
|                                                                                               |  | PRESSURES (PSI):   |            | HP            |        | FP                                |        | ISIP          |          | FSIP                  |            |                                    |                                | PRESSURES (PSI):   |      | HP            |          | FP                      |            | ISIP          |      | FSIP                  |      |                     |          |                   |  |           |  |           |  |     |  |    |  |    |  |  |
| REMARKS INCLUDING:<br>CEMENTING<br>LOGGING<br>PERFORATING<br>ACIDIZING<br>FRACTURING<br>PLUGS |  | FROM               |            | TO            |        | DESCRIPTION OF WORK               |        | FROM          |          | TO                    |            | DESCRIPTION OF WORK                |                                | FROM               |      | TO            |          | DESCRIPTION OF WORK     |            | FROM          |      | TO                    |      | DESCRIPTION OF WORK |          |                   |  |           |  |           |  |     |  |    |  |    |  |  |
|                                                                                               |  | 1200               |            | 200           |        | TESTING                           |        | 800           |          | 9' 5"                 |            | FINISH IN w/ CORE BBL              |                                | 400                |      | 1120          |          | Cutting Core #4         |            |               |      |                       |      |                     |          |                   |  |           |  |           |  |     |  |    |  |    |  |  |
|                                                                                               |  | 200                |            | 100           |        | Pull Packer hose - Pull Up 4' let |        | 9' 5"         |          | 9' 30"                |            | Rig Service - V BOPs               |                                | 1120               |      | 1200          |          | Hoist Core #4           |            |               |      |                       |      |                     |          |                   |  |           |  |           |  |     |  |    |  |    |  |  |
|                                                                                               |  | 100                |            | 300           |        | Bump Off                          |        | 9' 30"        |          | 1030                  |            | CHANGE 4" CAMERON ON MUD LINE      |                                |                    |      |               |          |                         |            |               |      |                       |      |                     |          |                   |  |           |  |           |  |     |  |    |  |    |  |  |
|                                                                                               |  | 300                |            | 545           |        | HOISTING D.S.T #5 - SLOWLY        |        | 1030          |          | 1100                  |            | CLEAN 15' TO BOTTOM - CIRC TO CORE |                                |                    |      |               |          |                         |            |               |      |                       |      |                     |          |                   |  |           |  |           |  |     |  |    |  |    |  |  |
|                                                                                               |  | 545                |            | 630           |        | BREAK DOWN PACKER                 |        | 1100          |          | 400                   |            | CUTTING CORE #4                    |                                |                    |      |               |          |                         |            |               |      |                       |      |                     |          |                   |  |           |  |           |  |     |  |    |  |    |  |  |
|                                                                                               |  | 630                |            | 645           |        | Pick Up Core BBL Service TARS     |        |               |          |                       |            |                                    |                                |                    |      |               |          |                         |            |               |      |                       |      |                     |          |                   |  |           |  |           |  |     |  |    |  |    |  |  |
|                                                                                               |  | 645                |            | 800           |        | Run In Hole w/ Core BBL           |        |               |          |                       |            |                                    |                                |                    |      |               |          |                         |            |               |      |                       |      |                     |          |                   |  |           |  |           |  |     |  |    |  |    |  |  |
| DRILLER                                                                                       |  | C. E. Calcutt      |            | NO. HELPERS   |        | 4                                 |        | DRILLER       |          | B. Armstrong          |            | NO. HELPERS                        |                                | 4                  |      | DRILLER       |          | D. P. Plummer           |            | NO. HELPERS   |      | 4                     |      |                     |          |                   |  |           |  |           |  |     |  |    |  |    |  |  |



DRILLER *etc 1* NO. HELPERS *1* DRILLER *R. Amstrong* NO. HELPERS *4* DRILLER *etc 1* NO. HELPERS *1*

# Hudson's Bay Oil and Gas Company Limited

## DAILY DRILLERS REPORT

DATE February 18/68

|                                                               |                                   |                  |                     |                      |                      |                      |                            |                 |                              |                                                |
|---------------------------------------------------------------|-----------------------------------|------------------|---------------------|----------------------|----------------------|----------------------|----------------------------|-----------------|------------------------------|------------------------------------------------|
| WELL NAME<br><u>Hudson Bay Cameron Hills AS-60-10-117-30W</u> | LDG. FLG. TO KB                   | CASING<br>RECORD | DEPTH<br><u>826</u> | SIZE<br><u>8 5/8</u> | WEIGHT<br><u>29#</u> | GRADE<br><u>J-55</u> | CEMENT<br><u>965 sacks</u> | ACID<br><u></u> | PLUG DOWN<br><u>Feb 1/68</u> | COMPANY<br>SUPERVISOR<br><u>Cliff J. Jones</u> |
| CONTRACTOR<br><u>S&amp;T Drilling</u>                         | TYPE RIG<br><u>NATIONAL SPARE</u> |                  | K. B. ELEV.         |                      |                      |                      |                            |                 |                              |                                                |
| RIG NO.<br><u>1E</u>                                          | TOOL PUSHER<br><u>W.B. Pinner</u> |                  | GRD. ELEV.          |                      |                      |                      |                            |                 |                              |                                                |

|                   |  |  |  |  |  |  |  |  |  |                  |  |  |  |  |  |  |  |  |  |                   |  |  |  |  |  |  |  |  |  |
|-------------------|--|--|--|--|--|--|--|--|--|------------------|--|--|--|--|--|--|--|--|--|-------------------|--|--|--|--|--|--|--|--|--|
| 12 P.M. TO 8 A.M. |  |  |  |  |  |  |  |  |  | 8 A.M. TO 4 P.M. |  |  |  |  |  |  |  |  |  | 4 P.M. TO 12 P.M. |  |  |  |  |  |  |  |  |  |
|-------------------|--|--|--|--|--|--|--|--|--|------------------|--|--|--|--|--|--|--|--|--|-------------------|--|--|--|--|--|--|--|--|--|

| DEPTH         | 12 P.M. TO 8 A.M. |            |      |      |      |     |         |          |  |  | 8 A.M. TO 4 P.M. |            |      |      |      |     |         |          |  |  | 4 P.M. TO 12 P.M. |            |      |      |      |     |         |          |  |  |
|---------------|-------------------|------------|------|------|------|-----|---------|----------|--|--|------------------|------------|------|------|------|-----|---------|----------|--|--|-------------------|------------|------|------|------|-----|---------|----------|--|--|
|               | START             | PROGRESS   |      |      |      | END |         |          |  |  | START            | PROGRESS   |      |      |      | END |         |          |  |  | START             | PROGRESS   |      |      |      | END |         |          |  |  |
| BIT<br>RECORD | NO.               | SERIAL NO. | TYPE | SIZE | FROM | TO  | FOOTAGE | HRS. RUN |  |  | NO.              | SERIAL NO. | TYPE | SIZE | FROM | TO  | FOOTAGE | HRS. RUN |  |  | NO.               | SERIAL NO. | TYPE | SIZE | FROM | TO  | FOOTAGE | HRS. RUN |  |  |
|               |                   |            |      |      |      |     |         |          |  |  |                  |            |      |      |      |     |         |          |  |  |                   |            |      |      |      |     |         |          |  |  |

| DRILLING<br>DATA | 12 P.M. TO 8 A.M. |               |             |               | 8 A.M. TO 4 P.M.  |               |             |               | 4 P.M. TO 12 P.M. |               |             |               |
|------------------|-------------------|---------------|-------------|---------------|-------------------|---------------|-------------|---------------|-------------------|---------------|-------------|---------------|
|                  | LINER SIZE        | PUMP PRESSURE | TABLE SPEED | WEIGHT ON BIT | LINER SIZE        | PUMP PRESSURE | TABLE SPEED | WEIGHT ON BIT | LINER SIZE        | PUMP PRESSURE | TABLE SPEED | WEIGHT ON BIT |
|                  | <u>5 1/2 x 14</u> |               |             |               | <u>5 1/2 x 14</u> |               |             |               | <u>5 1/2 x 14</u> | <u>150</u>    | <u>80</u>   | <u>12m</u>    |

| DRILLING<br>STRING | 12 P.M. TO 8 A.M. |        |         |            |          |           | 8 A.M. TO 4 P.M. |           |          |            |           |              | 4 P.M. TO 12 P.M. |           |         |            |            |              |
|--------------------|-------------------|--------|---------|------------|----------|-----------|------------------|-----------|----------|------------|-----------|--------------|-------------------|-----------|---------|------------|------------|--------------|
|                    | SIZE              | STANDS | SINGLES | DRILL COL. | KELLY IN | CORE BBL. | SIZE             | STANDS    | SINGLES  | DRILL COL. | KELLY IN  | CORE BBL.    | SIZE              | STANDS    | SINGLES | DRILL COL. | KELLY IN   | CORE BBL.    |
|                    |                   |        |         |            |          |           | <u>4</u>         | <u>43</u> | <u>2</u> | <u>23</u>  | <u>29</u> | <u>73.35</u> | <u>4</u>          | <u>44</u> |         | <u>23</u>  | <u>27'</u> | <u>73.35</u> |

| MUD<br>RECORD | 12 P.M. TO 8 A.M. |            |           |             |    |             | 8 A.M. TO 4 P.M. |        |     |    |    |    | 4 P.M. TO 12 P.M.                                                                                                        |             |           |            |    |    |
|---------------|-------------------|------------|-----------|-------------|----|-------------|------------------|--------|-----|----|----|----|--------------------------------------------------------------------------------------------------------------------------|-------------|-----------|------------|----|----|
|               | TYPE OF MUD       | WEIGHT     | VIS       | WL          | PH | FC          | TYPE OF MUD      | WEIGHT | VIS | WL | PH | FC | TYPE OF MUD                                                                                                              | WEIGHT      | VIS       | WL         | PH | FC |
|               | <u>Gyp</u>        | <u>9.9</u> | <u>58</u> | <u>10.6</u> |    | <u>1/32</u> |                  |        |     |    |    |    | <u>Gyp</u>                                                                                                               | <u>10.0</u> | <u>85</u> | <u>7.6</u> |    |    |
|               | ADDITIVES         |            |           |             |    |             | ADDITIVES        |        |     |    |    |    | ADDITIVES                                                                                                                |             |           |            |    |    |
|               |                   |            |           |             |    |             |                  |        |     |    |    |    | <u>CELLEX 300#</u> ? <u>Should have not mixed</u><br><u>Gel 600#</u> <u>mixed my mistake</u><br><u>Preservative 200#</u> |             |           |            |    |    |

| CORING | 12 P.M. TO 8 A.M. |      |    |           | 8 A.M. TO 4 P.M. |     |      |    | 4 P.M. TO 12 P.M. |           |           |             |             |            |                  |
|--------|-------------------|------|----|-----------|------------------|-----|------|----|-------------------|-----------|-----------|-------------|-------------|------------|------------------|
|        | NO.               | FROM | TO | RECOVERED | FORMATION        | NO. | FROM | TO | RECOVERED         | FORMATION | NO.       | FROM        | TO          | RECOVERED  | FORMATION        |
|        |                   |      |    |           |                  |     |      |    |                   |           | <u>#3</u> | <u>4875</u> | <u>4908</u> | <u>33'</u> | <u>Keg River</u> |

| SURVEY | 12 P.M. TO 8 A.M. |     |         |     | 8 A.M. TO 4 P.M. |     |         |     | 4 P.M. TO 12 P.M. |     |         |     |
|--------|-------------------|-----|---------|-----|------------------|-----|---------|-----|-------------------|-----|---------|-----|
|        | DEG. AT           | FT. | DEG. AT | FT. | DEG. AT          | FT. | DEG. AT | FT. | DEG. AT           | FT. | DEG. AT | FT. |
|        |                   |     |         |     |                  |     |         |     |                   |     |         |     |

| DRILL<br>STEM<br>TESTS                                                                     | 12 P.M. TO 8 A.M.                                                                              |                  |                  |                  | 8 A.M. TO 4 P.M.   |          |           |                         | 4 P.M. TO 12 P.M.     |                    |           |                  |                         |                       |  |    |    |      |      |
|--------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|------------------|------------------|------------------|--------------------|----------|-----------|-------------------------|-----------------------|--------------------|-----------|------------------|-------------------------|-----------------------|--|----|----|------|------|
|                                                                                            | NO.                                                                                            | INTERVAL         | FORMATION        |                  | NO.                | INTERVAL | FORMATION |                         | NO.                   | INTERVAL           | FORMATION |                  |                         |                       |  |    |    |      |      |
|                                                                                            | <u>3</u>                                                                                       | <u>4875-4875</u> | <u>Keg River</u> |                  |                    |          |           |                         |                       |                    |           |                  |                         |                       |  |    |    |      |      |
|                                                                                            | VALVE OPEN (MINS.) <u>60</u> INITIAL SHUT-IN (MINS.) <u>30</u> FINAL SHUT-IN (MINS.) <u>30</u> |                  |                  |                  | VALVE OPEN (MINS.) |          |           | INITIAL SHUT-IN (MINS.) | FINAL SHUT-IN (MINS.) | VALVE OPEN (MINS.) |           |                  | INITIAL SHUT-IN (MINS.) | FINAL SHUT-IN (MINS.) |  |    |    |      |      |
|                                                                                            | GAS TO SURFACE <u>4</u> MIN. @ <u>1</u> MCF/D MAX.                                             |                  |                  |                  | GAS TO SURFACE     |          |           | MIN. @                  | MCF/D MAX.            | GAS TO SURFACE     |           |                  | MIN. @                  | MCF/D MAX.            |  |    |    |      |      |
| OIL TO SURFACE MIN. @                                                                      |                                                                                                |                  | BBL/D MAX.       | OIL TO SURFACE   |                    |          | MIN. @    | BBL/D MAX.              | OIL TO SURFACE        |                    |           | MIN. @           | BBL/D MAX.              |                       |  |    |    |      |      |
| RECOVERY: <u>15' SULFUROUS GAS CUT MVD</u>                                                 |                                                                                                |                  |                  | RECOVERY:        |                    |          |           | RECOVERY:               |                       |                    |           | RECOVERY:        |                         |                       |  |    |    |      |      |
| PRESSURES (PSI): <u>2592</u> HP <u>384</u> FP <u>456</u> ISIP <u>1536</u> FSIP <u>1536</u> |                                                                                                |                  |                  | PRESSURES (PSI): |                    |          |           | HP                      | FP                    | ISIP               | FSIP      | PRESSURES (PSI): |                         |                       |  | HP | FP | ISIP | FSIP |

| REMARKS<br>INCLUDING:<br>CEMENTING<br>LOGGING<br>PERFORATING<br>ACIDIZING<br>FRACTURING<br>PLUGS | 12 P.M. TO 8 A.M.                        |             | 8 A.M. TO 4 P.M.                   |             | 4 P.M. TO 12 P.M.                    |             |
|--------------------------------------------------------------------------------------------------|------------------------------------------|-------------|------------------------------------|-------------|--------------------------------------|-------------|
|                                                                                                  | FROM                                     | TO          | FROM                               | TO          | FROM                                 | TO          |
|                                                                                                  | <u>1200</u>                              | <u>1215</u> | <u>800</u>                         | <u>1100</u> | <u>400</u>                           | <u>415</u>  |
|                                                                                                  | <u>CIRCULATE - RIG SERVICE</u>           |             | <u>HOISTING DST #3</u>             |             | <u>RIG SERVICE</u>                   |             |
|                                                                                                  | <u>1215</u>                              | <u>200</u>  | <u>1100</u>                        | <u>1145</u> | <u>415</u>                           | <u>1130</u> |
|                                                                                                  | <u>TRIP OUT TO TEST</u>                  |             | <u>BREAK &amp; LAY DOWN PACKER</u> |             | <u>CUTTING CORE #3</u>               |             |
|                                                                                                  | <u>200</u>                               | <u>215</u>  | <u>1145</u>                        | <u>1200</u> | <u>1130</u>                          | <u>1145</u> |
|                                                                                                  | <u>✓ BLIND RAMS ✓ MOTOR SHUT OFFS OK</u> |             | <u>RIG SERVICE - ✓ BOPs</u>        |             | <u>TRY TO UNJAM CORE - UNABLE TO</u> |             |
|                                                                                                  | <u>215</u>                               | <u>330</u>  | <u>1200</u>                        | <u>1230</u> | <u>1145</u>                          | <u>1200</u> |
|                                                                                                  | <u>MAKE UP PACKER</u>                    |             | <u>SKIP &amp; CUT DRIB LINE</u>    |             | <u>HOISTING CORE #3</u>              |             |
|                                                                                                  | <u>330</u>                               | <u>530</u>  | <u>1230</u>                        | <u>130</u>  |                                      |             |
|                                                                                                  | <u>RUN IN W/DST #3 MAKE UP TEST HEAD</u> |             | <u>SERVICE JARS</u>                |             |                                      |             |
|                                                                                                  | <u>530</u>                               | <u>800</u>  | <u>130</u>                         | <u>315</u>  |                                      |             |
|                                                                                                  | <u>TESTING - BREAK OFF TESTING HEAD</u>  |             | <u>RUN IN W/CORE BBL.</u>          |             |                                      |             |
|                                                                                                  |                                          |             | <u>315</u>                         | <u>330</u>  |                                      |             |
|                                                                                                  |                                          |             | <u>THAW OUT KELLY HOSE</u>         |             |                                      |             |
|                                                                                                  |                                          |             | <u>330</u>                         | <u>400</u>  |                                      |             |
|                                                                                                  |                                          |             | <u>CIRC TO CORE</u>                |             |                                      |             |

|                             |                      |                             |                      |                             |                      |
|-----------------------------|----------------------|-----------------------------|----------------------|-----------------------------|----------------------|
| DRILLER <u>W. B. Pinner</u> | NO. HELPERS <u>4</u> | DRILLER <u>B. Armstrong</u> | NO. HELPERS <u>4</u> | DRILLER <u>L. P. Pinner</u> | NO. HELPERS <u>4</u> |
|-----------------------------|----------------------|-----------------------------|----------------------|-----------------------------|----------------------|

## DAILY DRILLERS REPORT

Hudson's Bay Oil and Gas Company Limited

DATE Feb 17/68

| WELL NAME                                                                                     |  | LDG. FLG. TO KB                  |            | CASING RECORD      | DEPTH       | SIZE                                  | WEIGHT | GRADE                 | CEMENT   | ACID        | PLUG DOWN  | COMPANY SUPERVISOR                |                  |                                  |      |                       |          |                     |            |               |       |                    |      |                         |          |                                  |  |           |  |           |  |     |  |  |  |  |  |  |
|-----------------------------------------------------------------------------------------------|--|----------------------------------|------------|--------------------|-------------|---------------------------------------|--------|-----------------------|----------|-------------|------------|-----------------------------------|------------------|----------------------------------|------|-----------------------|----------|---------------------|------------|---------------|-------|--------------------|------|-------------------------|----------|----------------------------------|--|-----------|--|-----------|--|-----|--|--|--|--|--|--|
| CONTRACTOR                                                                                    |  | TYPE RIG                         |            |                    | K. B. ELEV. |                                       |        |                       |          |             |            |                                   |                  |                                  |      |                       |          |                     |            |               |       |                    |      |                         |          |                                  |  |           |  |           |  |     |  |  |  |  |  |  |
| RIG NO.                                                                                       |  | TOOL PUSHER                      |            | GRD. ELEV.         |             |                                       |        |                       |          |             |            |                                   |                  |                                  |      |                       |          |                     |            |               |       |                    |      |                         |          |                                  |  |           |  |           |  |     |  |  |  |  |  |  |
| 12 P.M. TO 8 A.M.                                                                             |  |                                  |            |                    |             |                                       |        |                       |          |             |            |                                   | 8 A.M. TO 4 P.M. |                                  |      |                       |          |                     |            |               |       |                    |      |                         |          | 4 P.M. TO 12 P.M.                |  |           |  |           |  |     |  |  |  |  |  |  |
| DEPTH                                                                                         |  | START                            |            |                    |             | PROGRESS                              |        |                       |          | END         |            |                                   |                  | START                            |      | PROGRESS              |          |                     |            | END           |       |                    |      | START                   |          | PROGRESS                         |  |           |  | END       |  |     |  |  |  |  |  |  |
| BIT RECORD                                                                                    |  | NO.                              | SERIAL NO. | TYPE               | SIZE        | FROM                                  | TO     | FOOTAGE               | HRS. RUN | NO.         | SERIAL NO. | TYPE                              | SIZE             | FROM                             | TO   | FOOTAGE               | HRS. RUN | NO.                 | SERIAL NO. | TYPE          | SIZE  | FROM               | TO   | FOOTAGE                 | HRS. RUN |                                  |  |           |  |           |  |     |  |  |  |  |  |  |
|                                                                                               |  | 12                               | 76050      | DMV                | 7 7/8       | 4800                                  | 4822   | 22                    | 5        | 12          | 76050      | DMV                               | 7 7/8            | 4800                             | 4850 | 50                    | 12 3/4   | 12                  | 76050      | DMV           | 7 7/8 | 4800               | 4875 | 75                      | 18 1/4   |                                  |  |           |  |           |  |     |  |  |  |  |  |  |
| DRILLING DATA                                                                                 |  | LINER SIZE                       |            | PUMP PRESSURE      |             | TABLE SPEED                           |        | WEIGHT ON BIT         |          | LINER SIZE  |            | PUMP PRESSURE                     |                  | TABLE SPEED                      |      | WEIGHT ON BIT         |          | LINER SIZE          |            | PUMP PRESSURE |       | TABLE SPEED        |      | WEIGHT ON BIT           |          |                                  |  |           |  |           |  |     |  |  |  |  |  |  |
|                                                                                               |  | 5 1/2 x 14                       |            | 700                |             | 15                                    |        | 38 m                  |          | 5 1/2 x 14  |            | 700                               |                  | 75                               |      | 38 m                  |          | 5 1/2 x 14          |            | 700           |       | 15                 |      | 38 m                    |          |                                  |  |           |  |           |  |     |  |  |  |  |  |  |
| DRILLING STRING                                                                               |  | SIZE                             |            | STANDS             |             | SINGLES                               |        | DRILL COL.            |          | KELLY IN    |            | CORE BBL.                         |                  | SIZE                             |      | STANDS                |          | SINGLES             |            | DRILL COL.    |       | KELLY IN           |      | CORE BBL.               |          |                                  |  |           |  |           |  |     |  |  |  |  |  |  |
|                                                                                               |  | 4                                |            | 44                 |             |                                       |        | 23                    |          | 18'         |            |                                   |                  | 4                                |      | 44                    |          | 1                   |            | 23            |       | 14.60              |      |                         |          |                                  |  |           |  |           |  |     |  |  |  |  |  |  |
| MUD RECORD                                                                                    |  | TYPE OF MUD                      |            | WEIGHT             |             | VIS                                   |        | WL                    |          | PH          |            | FC                                |                  | TYPE OF MUD                      |      | WEIGHT                |          | VIS                 |            | WL            |       | PH                 |      | FC                      |          |                                  |  |           |  |           |  |     |  |  |  |  |  |  |
|                                                                                               |  | Gyp                              |            | 9.7                |             | 60                                    |        | 10.6                  |          |             |            | 2/32                              |                  | GYP                              |      | 9.8                   |          | 58                  |            | 11.0          |       |                    |      |                         |          |                                  |  |           |  |           |  |     |  |  |  |  |  |  |
|                                                                                               |  |                                  |            | 9.8                |             | 61                                    |        |                       |          |             |            |                                   |                  |                                  |      | 9.8                   |          | 56                  |            | 10.7          |       |                    |      |                         |          |                                  |  |           |  |           |  |     |  |  |  |  |  |  |
|                                                                                               |  | ADDITIVES                        |            |                    |             |                                       |        |                       |          |             |            |                                   |                  | ADDITIVES PRESERVATIVE - 100#    |      |                       |          |                     |            |               |       |                    |      |                         |          | ADDITIVES                        |  |           |  |           |  |     |  |  |  |  |  |  |
| CORING                                                                                        |  | NO.                              |            | FROM               |             | TO                                    |        | RECOVERED             |          | FORMATION   |            | NO.                               |                  | FROM                             |      | TO                    |          | RECOVERED           |            | FORMATION     |       | NO.                |      | FROM                    |          | TO                               |  | RECOVERED |  | FORMATION |  |     |  |  |  |  |  |  |
| SURVEY                                                                                        |  | DEG. AT                          |            | FT.                |             | DEG. AT                               |        | FT.                   |          | DEG. AT     |            | FT.                               |                  | DEG. AT                          |      | FT.                   |          | DEG. AT             |            | FT.           |       | DEG. AT            |      | FT.                     |          | DEG. AT                          |  | FT.       |  | DEG. AT   |  | FT. |  |  |  |  |  |  |
| DRILL STEM TESTS                                                                              |  | NO.                              |            | INTERVAL           |             | FORMATION                             |        | NO.                   |          | INTERVAL    |            | FORMATION                         |                  | NO.                              |      | INTERVAL              |          | FORMATION           |            | NO.           |       | INTERVAL           |      | FORMATION               |          |                                  |  |           |  |           |  |     |  |  |  |  |  |  |
|                                                                                               |  |                                  |            | VALVE OPEN (MINS.) |             | INITIAL SHUT-IN (MINS.)               |        | FINAL SHUT-IN (MINS.) |          |             |            | VALVE OPEN (MINS.)                |                  | INITIAL SHUT-IN (MINS.)          |      | FINAL SHUT-IN (MINS.) |          |                     |            |               |       | VALVE OPEN (MINS.) |      | INITIAL SHUT-IN (MINS.) |          | FINAL SHUT-IN (MINS.)            |  |           |  |           |  |     |  |  |  |  |  |  |
|                                                                                               |  |                                  |            | GAS TO SURFACE     |             | MIN. @                                |        | MCF/D MAX.            |          |             |            | GAS TO SURFACE                    |                  | MIN. @                           |      | MCF/D MAX.            |          |                     |            |               |       | GAS TO SURFACE     |      | MIN. @                  |          | MCF/D MAX.                       |  |           |  |           |  |     |  |  |  |  |  |  |
|                                                                                               |  |                                  |            | OIL TO SURFACE     |             | MIN. @                                |        | BBL/D MAX.            |          |             |            | OIL TO SURFACE                    |                  | MIN. @                           |      | BBL/D MAX.            |          |                     |            |               |       | OIL TO SURFACE     |      | MIN. @                  |          | BBL/D MAX.                       |  |           |  |           |  |     |  |  |  |  |  |  |
|                                                                                               |  | RECOVERY:                        |            |                    |             |                                       |        |                       |          |             |            |                                   |                  | RECOVERY:                        |      |                       |          |                     |            |               |       |                    |      |                         |          | RECOVERY:                        |  |           |  |           |  |     |  |  |  |  |  |  |
|                                                                                               |  | PRESSURES (PSI): HP FP ISIP FSIP |            |                    |             |                                       |        |                       |          |             |            |                                   |                  | PRESSURES (PSI): HP FP ISIP FSIP |      |                       |          |                     |            |               |       |                    |      |                         |          | PRESSURES (PSI): HP FP ISIP FSIP |  |           |  |           |  |     |  |  |  |  |  |  |
| REMARKS INCLUDING:<br>CEMENTING<br>LOGGING<br>PERFORATING<br>ACIDIZING<br>FRACTURING<br>PLUGS |  | FROM                             |            | TO                 |             | DESCRIPTION OF WORK                   |        | FROM                  |          | TO          |            | DESCRIPTION OF WORK               |                  | FROM                             |      | TO                    |          | DESCRIPTION OF WORK |            | FROM          |       | TO                 |      | DESCRIPTION OF WORK     |          |                                  |  |           |  |           |  |     |  |  |  |  |  |  |
|                                                                                               |  | 12:00                            |            |                    |             | CHANGE ACTUATOR THROTTLES ON ELECTRIC |        | 8:00                  |          | 8:15        |            | RIG SERVICE - V BOPs & KELLY COCK |                  | 4:00                             |      | 4:15                  |          | RIG SERVICE         |            |               |       |                    |      |                         |          |                                  |  |           |  |           |  |     |  |  |  |  |  |  |
|                                                                                               |  | 1:15                             |            | 1:55               |             | Motor #2 Q319 RIG SERVICE             |        | 8:15                  |          | 4:00        |            | DRUG 7 7/8 HOLE                   |                  | 4:15                             |      | 9:00                  |          | DRUG 7 7/8 HOLE     |            |               |       |                    |      |                         |          |                                  |  |           |  |           |  |     |  |  |  |  |  |  |
|                                                                                               |  | 1:55                             |            | 3:00               |             | Run in W/BT #12 - CLEAN 10' to Bottom |        |                       |          |             |            |                                   |                  | 9:00                             |      | 10:00                 |          | CIRC SAMPLE @ 4870  |            |               |       |                    |      |                         |          |                                  |  |           |  |           |  |     |  |  |  |  |  |  |
|                                                                                               |  | 3:00                             |            | 5:00               |             | DRUG 7 7/8 HOLE                       |        |                       |          |             |            |                                   |                  | 10:00                            |      | 10:45                 |          | DRUG 7 7/8 HOLE     |            |               |       |                    |      |                         |          |                                  |  |           |  |           |  |     |  |  |  |  |  |  |
|                                                                                               |  |                                  |            |                    |             |                                       |        |                       |          |             |            |                                   |                  | 10:45                            |      | 12:00                 |          | CIRCULATE           |            |               |       |                    |      |                         |          |                                  |  |           |  |           |  |     |  |  |  |  |  |  |
| DRILLER                                                                                       |  | NO. HELPERS                      |            | DRILLER            |             | NO. HELPERS                           |        | DRILLER               |          | NO. HELPERS |            | DRILLER                           |                  | NO. HELPERS                      |      | DRILLER               |          | NO. HELPERS         |            |               |       |                    |      |                         |          |                                  |  |           |  |           |  |     |  |  |  |  |  |  |
| C. J. Anderson                                                                                |  | 4                                |            | B. Armstrong       |             | 4                                     |        | L. L. Morris          |          | 4           |            | L. L. Morris                      |                  | 4                                |      | L. L. Morris          |          | 4                   |            |               |       |                    |      |                         |          |                                  |  |           |  |           |  |     |  |  |  |  |  |  |

52.8 BAX4  
REV. 5/61A

DAILY DRILLERS REPORT

Hudson's Bay Oil and Gas Company Limited

DATE February 16/68

|            |                                             |                 |               |               |       |       |        |       |        |      |           |                    |
|------------|---------------------------------------------|-----------------|---------------|---------------|-------|-------|--------|-------|--------|------|-----------|--------------------|
| WELL NAME  | Hudson Bay Canadian Wells AS-60-10-117-30W2 | LDG. FLG. TO KB |               | CASING RECORD | DEPTH | SIZE  | WEIGHT | GRADE | CEMENT | ACID | PLUG DOWN | COMPANY SUPERVISOR |
| CONTRACTOR | S&T DRILLING Co.                            | TYPE RIG        | NATIONAL 50AF | K. B. ELEV.   | 826   | 8 5/8 | 24#    | J-55  | 465    |      | Feb 1/68  | Cliff J...         |
| RIG NO.    | 1F                                          | TOOL PUSHER     | W.D. James    | GRD. ELEV.    |       |       |        |       |        |      |           |                    |

|                 | 12 P.M. TO 8 A.M. |            |               |       |             |      |               |          | 8 A.M. TO 4 P.M. |            |               |       |             |      |               |          | 4 P.M. TO 12 P.M. |            |               |       |             |      |               |          |    |  |           |  |           |  |
|-----------------|-------------------|------------|---------------|-------|-------------|------|---------------|----------|------------------|------------|---------------|-------|-------------|------|---------------|----------|-------------------|------------|---------------|-------|-------------|------|---------------|----------|----|--|-----------|--|-----------|--|
| DEPTH           | START 4715        |            | PROGRESS 40'  |       | END 4755    |      |               |          | START 4755       |            | PROGRESS 29'  |       | END 4784    |      | START 4784    |          | PROGRESS 16'      |            | END 4800      |       |             |      |               |          |    |  |           |  |           |  |
| BIT RECORD      | NO.               | SERIAL NO. | TYPE          | SIZE  | FROM        | TO   | FOOTAGE       | HRS. RUN | NO.              | SERIAL NO. | TYPE          | SIZE  | FROM        | TO   | FOOTAGE       | HRS. RUN | NO.               | SERIAL NO. | TYPE          | SIZE  | FROM        | TO   | FOOTAGE       | HRS. RUN |    |  |           |  |           |  |
|                 | 11                | 907318     | MAN           | 7 7/8 | 4691        | 4755 | 64            | 11 3/4   | 11               | 907318     | MAN           | 7 7/8 | 4691        | 4784 | 93            | 19 1/4   | 11                | 907318     | MAN           | 7 7/8 | 4691        | 4800 | 109           | 23       |    |  |           |  |           |  |
| DRILLING DATA   | LINER SIZE        |            | PUMP PRESSURE |       | TABLE SPEED |      | WEIGHT ON BIT |          | LINER SIZE       |            | PUMP PRESSURE |       | TABLE SPEED |      | WEIGHT ON BIT |          | LINER SIZE        |            | PUMP PRESSURE |       | TABLE SPEED |      | WEIGHT ON BIT |          |    |  |           |  |           |  |
|                 | 5 1/2 x 14        |            | 1150          |       | 15          |      | 36m           |          | 5 1/2 x 14       |            | 1150          |       | 75          |      | 36m           |          | 5 1/2 x 14        |            | 1150          |       | 75          |      | 36m           |          |    |  |           |  |           |  |
| DRILLING STRING | SIZE              |            | STANDS        |       | SINGLES     |      | DRILL COL.    |          | KELLY IN         |            | CORE BBL.     |       | SIZE        |      | STANDS        |          | SINGLES           |            | DRILL COL.    |       | KELLY IN    |      | CORE BBL.     |          |    |  |           |  |           |  |
|                 | 4                 |            | 43            |       | 1           |      | 23            |          | 11.85            |            |               |       | 4           |      | 43            |          | 1                 |            | 23            |       | 41.39       |      |               |          |    |  |           |  |           |  |
| MUD RECORD      | TYPE OF MUD       |            | WEIGHT        |       | VIS         |      | WL            |          | PH               |            | FC            |       | TYPE OF MUD |      | WEIGHT        |          | VIS               |            | WL            |       | PH          |      | FC            |          |    |  |           |  |           |  |
|                 | Gyp               |            | 9.8           |       | 60          |      | 10.8          |          |                  |            |               |       | GYP         |      | 9.9           |          | 59                |            | 9.9           |       |             |      |               |          |    |  |           |  |           |  |
|                 |                   |            | 9.8           |       | 60          |      | 10.8          |          |                  |            |               |       |             |      | 9.8           |          | 58                |            | 9.9           |       |             |      |               |          |    |  |           |  |           |  |
|                 | ADDITIVES         |            | 6" AM 9.8     |       | 58          |      | 9.6           |          |                  |            |               |       | ADDITIVES   |      |               |          |                   |            |               |       |             |      |               |          |    |  |           |  |           |  |
| CORING          | NO.               |            | FROM          |       | TO          |      | RECOVERED     |          | FORMATION        |            | NO.           |       | FROM        |      | TO            |          | RECOVERED         |            | FORMATION     |       | NO.         |      | FROM          |          | TO |  | RECOVERED |  | FORMATION |  |
|                 |                   |            |               |       |             |      |               |          |                  |            |               |       |             |      |               |          |                   |            |               |       |             |      |               |          |    |  |           |  |           |  |

|                  |                    |  |                         |  |                       |  |                    |  |                         |  |                       |  |                    |  |                         |  |                       |  |                    |  |                         |  |                       |  |                    |  |                         |  |                       |  |
|------------------|--------------------|--|-------------------------|--|-----------------------|--|--------------------|--|-------------------------|--|-----------------------|--|--------------------|--|-------------------------|--|-----------------------|--|--------------------|--|-------------------------|--|-----------------------|--|--------------------|--|-------------------------|--|-----------------------|--|
| DRILL STEM TESTS | DEG. AT            |  | FT.                     |  | DEG. AT               |  | FT.                |  | DEG. AT                 |  | FT.                   |  | DEG. AT            |  | FT.                     |  | DEG. AT               |  | FT.                |  | DEG. AT                 |  | FT.                   |  | DEG. AT            |  | FT.                     |  |                       |  |
|                  | 2                  |  | 4810                    |  |                       |  |                    |  |                         |  |                       |  |                    |  |                         |  |                       |  |                    |  |                         |  |                       |  |                    |  |                         |  |                       |  |
|                  | NO.                |  | INTERVAL                |  | FORMATION             |  | NO.                |  | INTERVAL                |  | FORMATION             |  | NO.                |  | INTERVAL                |  | FORMATION             |  | NO.                |  | INTERVAL                |  | FORMATION             |  | NO.                |  | INTERVAL                |  | FORMATION             |  |
|                  | VALVE OPEN (MINS.) |  | INITIAL SHUT-IN (MINS.) |  | FINAL SHUT-IN (MINS.) |  | VALVE OPEN (MINS.) |  | INITIAL SHUT-IN (MINS.) |  | FINAL SHUT-IN (MINS.) |  | VALVE OPEN (MINS.) |  | INITIAL SHUT-IN (MINS.) |  | FINAL SHUT-IN (MINS.) |  | VALVE OPEN (MINS.) |  | INITIAL SHUT-IN (MINS.) |  | FINAL SHUT-IN (MINS.) |  | VALVE OPEN (MINS.) |  | INITIAL SHUT-IN (MINS.) |  | FINAL SHUT-IN (MINS.) |  |
|                  | GAS TO SURFACE     |  | MIN. @                  |  | MCF/D MAX.            |  | GAS TO SURFACE     |  | MIN. @                  |  | MCF/D MAX.            |  | GAS TO SURFACE     |  | MIN. @                  |  | MCF/D MAX.            |  | GAS TO SURFACE     |  | MIN. @                  |  | MCF/D MAX.            |  | GAS TO SURFACE     |  | MIN. @                  |  | MCF/D MAX.            |  |
|                  | OIL TO SURFACE     |  | MIN. @                  |  | BBL/D MAX.            |  | OIL TO SURFACE     |  | MIN. @                  |  | BBL/D MAX.            |  | OIL TO SURFACE     |  | MIN. @                  |  | BBL/D MAX.            |  | OIL TO SURFACE     |  | MIN. @                  |  | BBL/D MAX.            |  | OIL TO SURFACE     |  | MIN. @                  |  | BBL/D MAX.            |  |
| RECOVERY:        | PRESSURES (PSI):   |  | HP                      |  | FP                    |  | ISIP               |  | FSIP                    |  | PRESSURES (PSI):      |  | HP                 |  | FP                      |  | ISIP                  |  | FSIP               |  | PRESSURES (PSI):        |  | HP                    |  | FP                 |  | ISIP                    |  | FSIP                  |  |
|                  |                    |  |                         |  |                       |  |                    |  |                         |  |                       |  |                    |  |                         |  |                       |  |                    |  |                         |  |                       |  |                    |  |                         |  |                       |  |

|                                                                                               |      |      |                     |         |     |                                  |               |         |                        |  |               |
|-----------------------------------------------------------------------------------------------|------|------|---------------------|---------|-----|----------------------------------|---------------|---------|------------------------|--|---------------|
| REMARKS INCLUDING:<br>CEMENTING<br>LOGGING<br>PERFORATING<br>ACIDIZING<br>FRACTURING<br>PLUGS | FROM | TO   | DESCRIPTION OF WORK | FROM    | TO  | DESCRIPTION OF WORK              | FROM          | TO      | DESCRIPTION OF WORK    |  |               |
|                                                                                               | 1200 | 1215 | RIG SERVICE         | 800     | 815 | RIG SERVICE - J BOP & KELLY COCK | 400           | 415     | RIG SERVICE            |  |               |
|                                                                                               | 1215 | 800  | DRILL 7 7/8 HOLE    | 815     | 845 | DRILL 7 7/8 HOLE                 | 415           | 430     | FINISH WORKING ON PUMP |  |               |
|                                                                                               |      |      |                     | 845     | 400 | CHANGE HEAD IN PUMP              | 430           | 415     | DRILL 7 7/8 HOLE       |  |               |
|                                                                                               |      |      |                     |         |     |                                  | 815           | 830     | SURVEY @ 4810 - 2°     |  |               |
|                                                                                               |      |      |                     |         |     |                                  | 830           | 915     | WORK ON AIR LINES      |  |               |
|                                                                                               |      |      |                     |         |     |                                  | 915           | 1130    | TRIP OUT               |  |               |
|                                                                                               |      |      |                     |         |     |                                  | 1130          | 1200    | WORK ON AIR LINES      |  |               |
|                                                                                               |      |      |                     |         |     |                                  |               |         |                        |  |               |
|                                                                                               |      |      |                     |         |     |                                  |               |         |                        |  |               |
| DRILLER                                                                                       |      |      | NO. HELPERS 4       | DRILLER |     |                                  | NO. HELPERS 4 | DRILLER |                        |  | NO. HELPERS 4 |



## Hudson's Bay Oil and Gas Company Limited

## DAILY DRILLERS REPORT

DATE Feb 15/68

| WELL NAME          |     | LDG. FLG. TO KB                                                                                             |      | CASING RECORD | DEPTH       | SIZE                                                                                                  | WEIGHT  | GRADE    | CEMENT ACID | PLUG DOWN                                                                                             | COMPANY SUPERVISOR |                  |      |      |         |          |     |            |      |       |      |      |         |                   |  |  |  |  |  |  |  |  |  |  |  |
|--------------------|-----|-------------------------------------------------------------------------------------------------------------|------|---------------|-------------|-------------------------------------------------------------------------------------------------------|---------|----------|-------------|-------------------------------------------------------------------------------------------------------|--------------------|------------------|------|------|---------|----------|-----|------------|------|-------|------|------|---------|-------------------|--|--|--|--|--|--|--|--|--|--|--|
| CONTRACTOR         |     | K. B. ELEV.                                                                                                 |      |               | 826' 8 5/8" | 24"                                                                                                   | 555     | 46.55%   | 24/1/68     | Cliff James                                                                                           |                    |                  |      |      |         |          |     |            |      |       |      |      |         |                   |  |  |  |  |  |  |  |  |  |  |  |
| RIG NO.            |     | GRD. ELEV.                                                                                                  |      |               |             |                                                                                                       |         |          |             |                                                                                                       |                    |                  |      |      |         |          |     |            |      |       |      |      |         |                   |  |  |  |  |  |  |  |  |  |  |  |
| 12 P.M. TO 8 A.M.  |     |                                                                                                             |      |               |             |                                                                                                       |         |          |             |                                                                                                       |                    | 8 A.M. TO 4 P.M. |      |      |         |          |     |            |      |       |      |      |         | 4 P.M. TO 12 P.M. |  |  |  |  |  |  |  |  |  |  |  |
| DEPTH              |     | START <u>4627</u> PROGRESS <u>36'</u> END <u>4663</u>                                                       |      |               |             | START <u>4663</u> PROGRESS <u>28'</u> END <u>4691</u>                                                 |         |          |             | START <u>4691</u> PROGRESS <u>24</u> END <u>4715</u>                                                  |                    |                  |      |      |         |          |     |            |      |       |      |      |         |                   |  |  |  |  |  |  |  |  |  |  |  |
| BIT RECORD         | NO. | SERIAL NO.                                                                                                  | TYPE | SIZE          | FROM        | TO                                                                                                    | FOOTAGE | HRS. RUN | NO.         | SERIAL NO.                                                                                            | TYPE               | SIZE             | FROM | TO   | FOOTAGE | HRS. RUN | NO. | SERIAL NO. | TYPE | SIZE  | FROM | TO   | FOOTAGE | HRS. RUN          |  |  |  |  |  |  |  |  |  |  |  |
|                    | 10  | 94502                                                                                                       | OWU  | 7 7/8         | 4627        | 4663                                                                                                  | 61'     | 9 1/4    | 10          | 94502                                                                                                 | OWU                | 7 7/8            | 4663 | 4691 | 89      | 14 1/2   | 11  | 907318     | OWU  | 7 7/8 | 4691 | 4715 | 24      | 4                 |  |  |  |  |  |  |  |  |  |  |  |
| DRILLING DATA      |     | LINER SIZE <u>5 1/2 x 14"</u> PUMP PRESSURE <u>75</u> TABLE SPEED <u>36m</u> WEIGHT ON BIT                  |      |               |             | LINER SIZE <u>5 1/2 x 14</u> PUMP PRESSURE <u>1350</u> TABLE SPEED <u>75</u> WEIGHT ON BIT <u>36m</u> |         |          |             | LINER SIZE <u>5 1/2 x 14</u> PUMP PRESSURE <u>1150</u> TABLE SPEED <u>75</u> WEIGHT ON BIT <u>36m</u> |                    |                  |      |      |         |          |     |            |      |       |      |      |         |                   |  |  |  |  |  |  |  |  |  |  |  |
| DRILLING STRING    |     | SIZE <u>4"</u> STANDS <u>42</u> SINGLES <u>1</u> DRILL COL. <u>23</u> KELLY IN <u>14'</u> CORE BBL.         |      |               |             | SIZE <u>4</u> STANDS <u>42</u> SINGLES <u>2</u> DRILL COL. <u>23</u> KELLY IN <u>11'</u> CORE BBL.    |         |          |             | SIZE <u>4</u> STANDS <u>42</u> SINGLES <u>2</u> DRILL COL. <u>23</u> KELLY IN <u>35'</u> CORE BBL.    |                    |                  |      |      |         |          |     |            |      |       |      |      |         |                   |  |  |  |  |  |  |  |  |  |  |  |
| MUD RECORD         |     | TYPE OF MUD <u>Drill</u> WEIGHT <u>9.7</u> VIS <u>49</u> WL <u>15.2</u> PH. <u>5.4</u> FC <u>10.4</u>       |      |               |             | TYPE OF MUD <u>Drill</u> WEIGHT <u>9.7</u> VIS <u>63</u> WL <u>10.2</u> PH. <u>6.3</u> FC <u>10.2</u> |         |          |             | TYPE OF MUD <u>GYP</u> WEIGHT <u>9.8</u> VIS <u>59</u> WL <u>11.2</u> PH. <u>8.5</u> FC <u>3.2</u>    |                    |                  |      |      |         |          |     |            |      |       |      |      |         |                   |  |  |  |  |  |  |  |  |  |  |  |
| CORING             |     | NO. <u>1</u> FROM <u>1200</u> TO <u>1215</u> RECOVERED <u>1200</u> FORMATION <u>1200</u>                    |      |               |             | NO. <u>1</u> FROM <u>800</u> TO <u>815</u> RECOVERED <u>800</u> FORMATION <u>800</u>                  |         |          |             | NO. <u>1</u> FROM <u>400</u> TO <u>415</u> RECOVERED <u>400</u> FORMATION <u>400</u>                  |                    |                  |      |      |         |          |     |            |      |       |      |      |         |                   |  |  |  |  |  |  |  |  |  |  |  |
| SURVEY             |     | DEG. AT <u>1200</u> FT. <u>1215</u> DEG. AT <u>1200</u> FT. <u>1215</u> DEG. AT <u>1200</u> FT. <u>1215</u> |      |               |             | DEG. AT <u>800</u> FT. <u>815</u> DEG. AT <u>800</u> FT. <u>815</u> DEG. AT <u>800</u> FT. <u>815</u> |         |          |             | DEG. AT <u>400</u> FT. <u>415</u> DEG. AT <u>400</u> FT. <u>415</u> DEG. AT <u>400</u> FT. <u>415</u> |                    |                  |      |      |         |          |     |            |      |       |      |      |         |                   |  |  |  |  |  |  |  |  |  |  |  |
| DRILL STEM TESTS   |     | NO. <u>1</u> INTERVAL <u>1200-1215</u> FORMATION <u>1200</u>                                                |      |               |             | NO. <u>1</u> INTERVAL <u>800-815</u> FORMATION <u>800</u>                                             |         |          |             | NO. <u>1</u> INTERVAL <u>400-415</u> FORMATION <u>400</u>                                             |                    |                  |      |      |         |          |     |            |      |       |      |      |         |                   |  |  |  |  |  |  |  |  |  |  |  |
| REMARKS INCLUDING: |     | FROM <u>1200</u> TO <u>1215</u> DESCRIPTION OF WORK <u>Rig Service</u>                                      |      |               |             | FROM <u>800</u> TO <u>815</u> DESCRIPTION OF WORK <u>Rig Service</u>                                  |         |          |             | FROM <u>400</u> TO <u>415</u> DESCRIPTION OF WORK <u>FINISH OUT W/PLUGGED BIT</u>                     |                    |                  |      |      |         |          |     |            |      |       |      |      |         |                   |  |  |  |  |  |  |  |  |  |  |  |
| CEMENTING          |     | FROM <u>1200</u> TO <u>1215</u> DESCRIPTION OF WORK <u>Rig Service</u>                                      |      |               |             | FROM <u>800</u> TO <u>815</u> DESCRIPTION OF WORK <u>Rig Service</u>                                  |         |          |             | FROM <u>400</u> TO <u>415</u> DESCRIPTION OF WORK <u>FINISH OUT W/PLUGGED BIT</u>                     |                    |                  |      |      |         |          |     |            |      |       |      |      |         |                   |  |  |  |  |  |  |  |  |  |  |  |
| LOGGING            |     | FROM <u>1200</u> TO <u>1215</u> DESCRIPTION OF WORK <u>Rig Service</u>                                      |      |               |             | FROM <u>800</u> TO <u>815</u> DESCRIPTION OF WORK <u>Rig Service</u>                                  |         |          |             | FROM <u>400</u> TO <u>415</u> DESCRIPTION OF WORK <u>FINISH OUT W/PLUGGED BIT</u>                     |                    |                  |      |      |         |          |     |            |      |       |      |      |         |                   |  |  |  |  |  |  |  |  |  |  |  |
| PERFORATING        |     | FROM <u>1200</u> TO <u>1215</u> DESCRIPTION OF WORK <u>Rig Service</u>                                      |      |               |             | FROM <u>800</u> TO <u>815</u> DESCRIPTION OF WORK <u>Rig Service</u>                                  |         |          |             | FROM <u>400</u> TO <u>415</u> DESCRIPTION OF WORK <u>FINISH OUT W/PLUGGED BIT</u>                     |                    |                  |      |      |         |          |     |            |      |       |      |      |         |                   |  |  |  |  |  |  |  |  |  |  |  |
| ACIDIZING          |     | FROM <u>1200</u> TO <u>1215</u> DESCRIPTION OF WORK <u>Rig Service</u>                                      |      |               |             | FROM <u>800</u> TO <u>815</u> DESCRIPTION OF WORK <u>Rig Service</u>                                  |         |          |             | FROM <u>400</u> TO <u>415</u> DESCRIPTION OF WORK <u>FINISH OUT W/PLUGGED BIT</u>                     |                    |                  |      |      |         |          |     |            |      |       |      |      |         |                   |  |  |  |  |  |  |  |  |  |  |  |
| PLUGS              |     | FROM <u>1200</u> TO <u>1215</u> DESCRIPTION OF WORK <u>Rig Service</u>                                      |      |               |             | FROM <u>800</u> TO <u>815</u> DESCRIPTION OF WORK <u>Rig Service</u>                                  |         |          |             | FROM <u>400</u> TO <u>415</u> DESCRIPTION OF WORK <u>FINISH OUT W/PLUGGED BIT</u>                     |                    |                  |      |      |         |          |     |            |      |       |      |      |         |                   |  |  |  |  |  |  |  |  |  |  |  |
| DRILLER            |     | DRILLER <u>Cliff James</u> NO. HELPERS <u>4</u>                                                             |      |               |             | DRILLER <u>Cliff James</u> NO. HELPERS <u>4</u>                                                       |         |          |             | DRILLER <u>Cliff James</u> NO. HELPERS <u>4</u>                                                       |                    |                  |      |      |         |          |     |            |      |       |      |      |         |                   |  |  |  |  |  |  |  |  |  |  |  |

DATE Feb 14/68

|                    |  |  |  |  |  |  |  |  |  |                     |  |  |  |  |  |  |  |  |  |                   |  |  |  |  |  |  |  |  |  |
|--------------------|--|--|--|--|--|--|--|--|--|---------------------|--|--|--|--|--|--|--|--|--|-------------------|--|--|--|--|--|--|--|--|--|
| WELL NAME          |  |  |  |  |  |  |  |  |  | DATE                |  |  |  |  |  |  |  |  |  | COMPANY           |  |  |  |  |  |  |  |  |  |
| CONTRACTOR         |  |  |  |  |  |  |  |  |  | LDG. FLG. TO KB     |  |  |  |  |  |  |  |  |  | CASING            |  |  |  |  |  |  |  |  |  |
| RIG NO.            |  |  |  |  |  |  |  |  |  | K. B. ELEV.         |  |  |  |  |  |  |  |  |  | RECORD            |  |  |  |  |  |  |  |  |  |
| TOOL PUSHER        |  |  |  |  |  |  |  |  |  | GRD. ELEV.          |  |  |  |  |  |  |  |  |  | DEPTH             |  |  |  |  |  |  |  |  |  |
| 12 P.M. TO 8 A.M.  |  |  |  |  |  |  |  |  |  | 8 A.M. TO 4 P.M.    |  |  |  |  |  |  |  |  |  | 4 P.M. TO 12 P.M. |  |  |  |  |  |  |  |  |  |
| DEPTH              |  |  |  |  |  |  |  |  |  | START               |  |  |  |  |  |  |  |  |  | END               |  |  |  |  |  |  |  |  |  |
| BIT RECORD         |  |  |  |  |  |  |  |  |  | NO.                 |  |  |  |  |  |  |  |  |  | SERIAL NO.        |  |  |  |  |  |  |  |  |  |
| DRILLING DATA      |  |  |  |  |  |  |  |  |  | L. AER SIZE         |  |  |  |  |  |  |  |  |  | PUMP PRESSURE     |  |  |  |  |  |  |  |  |  |
| DRILLING STRING    |  |  |  |  |  |  |  |  |  | SIZE                |  |  |  |  |  |  |  |  |  | STANDS            |  |  |  |  |  |  |  |  |  |
| MUD RECORD         |  |  |  |  |  |  |  |  |  | TYPE OF MUD         |  |  |  |  |  |  |  |  |  | WEIGHT            |  |  |  |  |  |  |  |  |  |
| CORING             |  |  |  |  |  |  |  |  |  | NO.                 |  |  |  |  |  |  |  |  |  | FROM              |  |  |  |  |  |  |  |  |  |
| SURVEY             |  |  |  |  |  |  |  |  |  | DEG. AT             |  |  |  |  |  |  |  |  |  | FT.               |  |  |  |  |  |  |  |  |  |
| DRILL STEM TESTS   |  |  |  |  |  |  |  |  |  | NO.                 |  |  |  |  |  |  |  |  |  | INTERVAL          |  |  |  |  |  |  |  |  |  |
| REMARKS INCLUDING: |  |  |  |  |  |  |  |  |  | FROM                |  |  |  |  |  |  |  |  |  | TO                |  |  |  |  |  |  |  |  |  |
| CEMENTING          |  |  |  |  |  |  |  |  |  | DESCRIPTION OF WORK |  |  |  |  |  |  |  |  |  | FROM              |  |  |  |  |  |  |  |  |  |
| LOGGING            |  |  |  |  |  |  |  |  |  | DESCRIPTION OF WORK |  |  |  |  |  |  |  |  |  | FROM              |  |  |  |  |  |  |  |  |  |
| PERFORATING        |  |  |  |  |  |  |  |  |  | DESCRIPTION OF WORK |  |  |  |  |  |  |  |  |  | FROM              |  |  |  |  |  |  |  |  |  |
| ACIDIZING          |  |  |  |  |  |  |  |  |  | DESCRIPTION OF WORK |  |  |  |  |  |  |  |  |  | FROM              |  |  |  |  |  |  |  |  |  |
| FRACTURING         |  |  |  |  |  |  |  |  |  | DESCRIPTION OF WORK |  |  |  |  |  |  |  |  |  | FROM              |  |  |  |  |  |  |  |  |  |
| PLUGS              |  |  |  |  |  |  |  |  |  | DESCRIPTION OF WORK |  |  |  |  |  |  |  |  |  | FROM              |  |  |  |  |  |  |  |  |  |
| DRILLER            |  |  |  |  |  |  |  |  |  | NO. HELPERS         |  |  |  |  |  |  |  |  |  | DRILLER           |  |  |  |  |  |  |  |  |  |
| NO. HELPERS        |  |  |  |  |  |  |  |  |  | NO. HELPERS         |  |  |  |  |  |  |  |  |  | DRILLER           |  |  |  |  |  |  |  |  |  |
| NO. HELPERS        |  |  |  |  |  |  |  |  |  | NO. HELPERS         |  |  |  |  |  |  |  |  |  | DRILLER           |  |  |  |  |  |  |  |  |  |

DATE 2-13-68

[illegible]



Hudson's Bay Oil and Gas Company Limited

DAILY DRILLERS REPORT

DATE Feb 12/68

|            |                                     |                 |          |               |       |       |        |       |        |      |           |                    |
|------------|-------------------------------------|-----------------|----------|---------------|-------|-------|--------|-------|--------|------|-----------|--------------------|
| WELL NAME  | H.B. Cameron Hills AS-60-10-117-W30 | LDG. FLG. TO KB |          | CASING RECORD | DEPTH | SIZE  | WEIGHT | GRADE | CEMENT | ACID | PLUG DOWN | COMPANY SUPERVISOR |
| CONTRACTOR | S&T Drilling Co. Ltd                | TYPE RIG        | NAT 50AE | K. B. ELEV.   | 826   | 8 7/8 | 24"    | J55   | 4655#  |      | Feb 1/68  | Cliff Jansen       |
| RIG NO.    | 1E                                  | TOOL PUSHER     |          | GRD. ELEV.    |       |       |        |       |        |      |           |                    |

|            |                   |            |          |      |      |    |         |          |                  |            |          |        |      |      |         |          |                   |            |          |        |      |      |         |          |
|------------|-------------------|------------|----------|------|------|----|---------|----------|------------------|------------|----------|--------|------|------|---------|----------|-------------------|------------|----------|--------|------|------|---------|----------|
|            | 12 P.M. TO 8 A.M. |            |          |      |      |    |         |          | 8 A.M. TO 4 P.M. |            |          |        |      |      |         |          | 4 P.M. TO 12 P.M. |            |          |        |      |      |         |          |
| DEPTH      | START             |            | PROGRESS |      |      |    | END     |          | START            |            | PROGRESS |        |      |      | END     |          | START             |            | PROGRESS |        |      |      | END     |          |
| BIT RECORD | NO.               | SERIAL NO. | TYPE     | SIZE | FROM | TO | FOOTAGE | HRS. RUN | NO.              | SERIAL NO. | TYPE     | SIZE   | FROM | TO   | FOOTAGE | HRS. RUN | NO.               | SERIAL NO. | TYPE     | SIZE   | FROM | TO   | FOOTAGE | HRS. RUN |
|            |                   |            |          |      |      |    |         |          | 19               | 0568       | D        | 6 3/16 | 4443 | 4456 | 13      | 2        | 19                | 0568       | D        | 6 3/16 | 4443 | 4500 | 57      | 10       |
|            |                   |            |          |      |      |    |         |          |                  |            |          |        |      |      |         |          |                   |            |          |        |      |      |         |          |

|               |            |  |               |  |             |  |               |  |            |  |               |  |             |  |               |  |            |  |               |  |             |  |               |  |
|---------------|------------|--|---------------|--|-------------|--|---------------|--|------------|--|---------------|--|-------------|--|---------------|--|------------|--|---------------|--|-------------|--|---------------|--|
| DRILLING DATA | LINER SIZE |  | PUMP PRESSURE |  | TABLE SPEED |  | WEIGHT ON BIT |  | LINER SIZE |  | PUMP PRESSURE |  | TABLE SPEED |  | WEIGHT ON BIT |  | LINER SIZE |  | PUMP PRESSURE |  | TABLE SPEED |  | WEIGHT ON BIT |  |
|               | 5 1/2 x 14 |  | 600           |  | 60          |  | 6-10-12       |  | 5 1/2 x 14 |  | 600           |  | 75          |  | 12            |  | 5 1/2 x 14 |  | 600           |  | 75          |  | 12            |  |

|                 |      |        |         |            |          |           |      |        |         |            |          |           |      |        |         |            |          |           |
|-----------------|------|--------|---------|------------|----------|-----------|------|--------|---------|------------|----------|-----------|------|--------|---------|------------|----------|-----------|
| DRILLING STRING | SIZE | STANDS | SINGLES | DRILL COL. | KELLY IN | CORE BBL. | SIZE | STANDS | SINGLES | DRILL COL. | KELLY IN | CORE BBL. | SIZE | STANDS | SINGLES | DRILL COL. | KELLY IN | CORE BBL. |
|                 | 40   |        |         | 23         | 15'      |           | 4    | 39     | 1       | 23         | 13       | 12.40     | 4    | 39     | 2       | 23         | 31'      | 22'       |

|                    |             |        |     |    |    |    |             |        |     |    |    |                   |             |        |     |      |    |      |
|--------------------|-------------|--------|-----|----|----|----|-------------|--------|-----|----|----|-------------------|-------------|--------|-----|------|----|------|
| MUD RECORD         | TYPE OF MUD | WEIGHT | VIS | WL | PH | FC | TYPE OF MUD | WEIGHT | VIS | WL | PH | FC                | TYPE OF MUD | WEIGHT | VIS | WL   | PH | FC   |
|                    |             |        |     |    |    |    |             |        |     |    |    |                   |             | 9.6    | 55  | 15.8 |    | 7.32 |
|                    | ADDITIVES   |        |     |    |    |    | ADDITIVES   |        |     |    |    |                   | ADDITIVES   |        |     |      |    |      |
| Straps out 4469.28 |             |        |     |    |    |    |             |        |     |    |    | Gel 2000*         |             |        |     |      |    |      |
| Dally 4468.84      |             |        |     |    |    |    |             |        |     |    |    | PRESERVATIVE 100* |             |        |     |      |    |      |
| Diff -44           |             |        |     |    |    |    |             |        |     |    |    | IMPERMAX 300*     |             |        |     |      |    |      |

|        |     |      |    |           |           |     |      |    |           |           |     |      |    |           |           |
|--------|-----|------|----|-----------|-----------|-----|------|----|-----------|-----------|-----|------|----|-----------|-----------|
| CORING | NO. | FROM | TO | RECOVERED | FORMATION | NO. | FROM | TO | RECOVERED | FORMATION | NO. | FROM | TO | RECOVERED | FORMATION |
|        |     |      |    |           |           |     |      |    |           |           |     |      |    |           |           |

|        |         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |
|--------|---------|-----|---------|-----|---------|-----|---------|-----|---------|-----|---------|-----|---------|-----|---------|-----|
| SURVEY | DEG. AT | FT. | DEG. AT | FT. | DEG. AT | FT. | DEG. AT | FT. | DEG. AT | FT. | DEG. AT | FT. | DEG. AT | FT. | DEG. AT | FT. |
|        |         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |

|                  |                    |    |                         |           |                       |      |                    |                         |                       |                    |                         |                       |                  |  |    |    |      |      |
|------------------|--------------------|----|-------------------------|-----------|-----------------------|------|--------------------|-------------------------|-----------------------|--------------------|-------------------------|-----------------------|------------------|--|----|----|------|------|
| DRILL STEM TESTS | NO.                | 1  | INTERVAL                | 4379-4443 | FORMATION             | NO.  | INTERVAL           | FORMATION               | NO.                   | INTERVAL           | FORMATION               |                       |                  |  |    |    |      |      |
|                  | VALVE OPEN (MINS.) | 60 | INITIAL SHUT-IN (MINS.) | 45        | FINAL SHUT-IN (MINS.) | 30   | VALVE OPEN (MINS.) | INITIAL SHUT-IN (MINS.) | FINAL SHUT-IN (MINS.) | VALVE OPEN (MINS.) | INITIAL SHUT-IN (MINS.) | FINAL SHUT-IN (MINS.) |                  |  |    |    |      |      |
|                  | GAS TO SURFACE     | 3  | MIN. @                  |           | MCF/D MAX.            |      | GAS TO SURFACE     | MIN. @                  | MCF/D MAX.            | GAS TO SURFACE     | MIN. @                  | MCF/D MAX.            |                  |  |    |    |      |      |
|                  | OIL TO SURFACE     |    | MIN. @                  |           | BBL/D MAX.            |      | OIL TO SURFACE     | MIN. @                  | BBL/D MAX.            | OIL TO SURFACE     | MIN. @                  | BBL/D MAX.            |                  |  |    |    |      |      |
|                  | RECOVERY:          |    |                         |           |                       |      | RECOVERY:          |                         |                       |                    |                         |                       |                  |  |    |    |      |      |
|                  | PRESSURES (PSI):   |    | HP                      | FP        | ISIP                  | FSIP | PRESSURES (PSI):   |                         | HP                    | FP                 | ISIP                    | FSIP                  | PRESSURES (PSI): |  | HP | FP | ISIP | FSIP |

|                                                                                               |      |     |                              |      |      |                            |      |      |                     |
|-----------------------------------------------------------------------------------------------|------|-----|------------------------------|------|------|----------------------------|------|------|---------------------|
| REMARKS INCLUDING:<br>CEMENTING<br>LOGGING<br>PERFORATING<br>ACIDIZING<br>FRACTURING<br>PLUGS | FROM | TO  | DESCRIPTION OF WORK          | FROM | TO   | DESCRIPTION OF WORK        | FROM | TO   | DESCRIPTION OF WORK |
|                                                                                               | 1200 | 130 | Finish shapping out to 2nd   | 800  | 915  | Trap Out w/ D.S.T. #1      | 400  | 1200 | Cutting Core #1     |
|                                                                                               | 130  | 145 | Chuck Bands & motor shut off | 915  | 1000 | BREAK DOWN PACKER          |      |      |                     |
|                                                                                               | 145  | 200 | Slip 23' dslg line           | 1000 | 1015 | Rig Service / BIND RAILS   |      |      |                     |
|                                                                                               | 200  | 245 | Make up tools for D.S.T. #1  | 1015 | 1045 | WAIT ON ORDERS             |      |      |                     |
|                                                                                               | 245  | 445 | Run in slowly w/ D.S.T. #1   | 1045 | 1130 | Pick Up Core BBL           |      |      |                     |
|                                                                                               | 445  | 500 | Head up D.S.T. & set packer  | 1130 | 115  | Run in w/ Core BBL         |      |      |                     |
|                                                                                               | 500  | 715 | Testing w/ D.S.T. #1         | 115  | 200  | CLEAN 10' to Bottom - Core |      |      |                     |
|                                                                                               | 715  |     | Pull packer loose &          | 200  | 400  | Cutting Core #1            |      |      |                     |
|                                                                                               |      | 800 | Loist D.S.T. #1              |      |      |                            |      |      |                     |

|              |             |              |             |         |             |
|--------------|-------------|--------------|-------------|---------|-------------|
| DRILLER      | NO. HELPERS | DRILLER      | NO. HELPERS | DRILLER | NO. HELPERS |
| W. J. Oliver | 4           | W. J. Oliver | 4           |         |             |



## Hudson's Bay Oil and Gas Company Limited

## DAILY DRILLERS REPORT

DATE Feb 11/68

| WELL NAME          |  | LDG. FLG. TO KB                                                  |  | CASING RECORD | DEPTH | SIZE  | WEIGHT | GRADE | CEMENT | ACID | PLUG DOWN | COMPANY SUPERVISOR |                  |                                                                  |  |  |  |  |  |  |  |  |  |  |  |                                                                            |  |  |  |  |  |  |  |  |  |  |  |  |
|--------------------|--|------------------------------------------------------------------|--|---------------|-------|-------|--------|-------|--------|------|-----------|--------------------|------------------|------------------------------------------------------------------|--|--|--|--|--|--|--|--|--|--|--|----------------------------------------------------------------------------|--|--|--|--|--|--|--|--|--|--|--|--|
| CONTRACTOR         |  | K. B. ELEV.                                                      |  |               | 826   | 8 5/8 | 24"    | 255   |        |      |           |                    |                  |                                                                  |  |  |  |  |  |  |  |  |  |  |  |                                                                            |  |  |  |  |  |  |  |  |  |  |  |  |
| RIG NO.            |  | TOOL PUSHER                                                      |  | GRD. ELEV.    |       |       |        |       |        |      |           |                    |                  |                                                                  |  |  |  |  |  |  |  |  |  |  |  |                                                                            |  |  |  |  |  |  |  |  |  |  |  |  |
| 12 P.M. TO 8 A.M.  |  |                                                                  |  |               |       |       |        |       |        |      |           |                    | 8 A.M. TO 4 P.M. |                                                                  |  |  |  |  |  |  |  |  |  |  |  | 4 P.M. TO 12 P.M.                                                          |  |  |  |  |  |  |  |  |  |  |  |  |
| DEPTH              |  | START 4335 PROGRESS 73' END 4408                                 |  |               |       |       |        |       |        |      |           |                    |                  | START 4408 PROGRESS 35' END 4443                                 |  |  |  |  |  |  |  |  |  |  |  | START 4443 PROGRESS END                                                    |  |  |  |  |  |  |  |  |  |  |  |  |
| BIT RECORD         |  | NO. SERIAL NO. TYPE SIZE FROM TO FOOTAGE HRS. RUN                |  |               |       |       |        |       |        |      |           |                    |                  | NO. SERIAL NO. TYPE SIZE FROM TO FOOTAGE HRS. RUN                |  |  |  |  |  |  |  |  |  |  |  | NO. SERIAL NO. TYPE SIZE FROM TO FOOTAGE HRS. RUN                          |  |  |  |  |  |  |  |  |  |  |  |  |
|                    |  | 5 94086 OSC 1 7/8 3779 4408 629' 35                              |  |               |       |       |        |       |        |      |           |                    |                  | 6 94468 XIG 1 7/8 4408 4443 35 2 3/4                             |  |  |  |  |  |  |  |  |  |  |  |                                                                            |  |  |  |  |  |  |  |  |  |  |  |  |
|                    |  | 6 94468 XIG 7/8 4408 Run 853 14                                  |  |               |       |       |        |       |        |      |           |                    |                  |                                                                  |  |  |  |  |  |  |  |  |  |  |  | RERUN                                                                      |  |  |  |  |  |  |  |  |  |  |  |  |
| DRILLING DATA      |  | LINER SIZE PUMP PRESSURE TABLE SPEED WEIGHT ON BIT               |  |               |       |       |        |       |        |      |           |                    |                  | LINER SIZE PUMP PRESSURE TABLE SPEED WEIGHT ON BIT               |  |  |  |  |  |  |  |  |  |  |  | LINER SIZE PUMP PRESSURE TABLE SPEED WEIGHT ON BIT                         |  |  |  |  |  |  |  |  |  |  |  |  |
|                    |  | 5 1/2 x 14" 700 80 26m                                           |  |               |       |       |        |       |        |      |           |                    |                  | 5 1/2 x 14 1150 90 24m                                           |  |  |  |  |  |  |  |  |  |  |  |                                                                            |  |  |  |  |  |  |  |  |  |  |  |  |
| DRILLING STRING    |  | SIZE STANDS SINGLES DRILL COL. KELLY IN CORE BBL.                |  |               |       |       |        |       |        |      |           |                    |                  | SIZE STANDS SINGLES DRILL COL. KELLY IN CORE BBL.                |  |  |  |  |  |  |  |  |  |  |  | SIZE STANDS SINGLES DRILL COL. KELLY IN CORE BBL.                          |  |  |  |  |  |  |  |  |  |  |  |  |
|                    |  | 4 39 1 23 41.00                                                  |  |               |       |       |        |       |        |      |           |                    |                  | 4 40 23 15'                                                      |  |  |  |  |  |  |  |  |  |  |  | 4" 40 23 15                                                                |  |  |  |  |  |  |  |  |  |  |  |  |
| MUD RECORD         |  | TYPE OF MUD WEIGHT VIS WL PH FC                                  |  |               |       |       |        |       |        |      |           |                    |                  | TYPE OF MUD WEIGHT VIS WL PH FC                                  |  |  |  |  |  |  |  |  |  |  |  | TYPE OF MUD WEIGHT VIS WL PH FC                                            |  |  |  |  |  |  |  |  |  |  |  |  |
|                    |  | GYP 9.4 47 16 7.9 2 1/2                                          |  |               |       |       |        |       |        |      |           |                    |                  | GYP 9.4 48 16 3 1/2                                              |  |  |  |  |  |  |  |  |  |  |  | GYP 9.5 60 13.8 1 1/2                                                      |  |  |  |  |  |  |  |  |  |  |  |  |
|                    |  | ADDITIVES Preservative 50"                                       |  |               |       |       |        |       |        |      |           |                    |                  | ADDITIVES IMPERME 300#                                           |  |  |  |  |  |  |  |  |  |  |  | ADDITIVES Imperme 400#                                                     |  |  |  |  |  |  |  |  |  |  |  |  |
| CORING             |  | NO. FROM TO RECOVERED FORMATION                                  |  |               |       |       |        |       |        |      |           |                    |                  | NO. FROM TO RECOVERED FORMATION                                  |  |  |  |  |  |  |  |  |  |  |  | NO. FROM TO RECOVERED FORMATION                                            |  |  |  |  |  |  |  |  |  |  |  |  |
| SURVEY             |  | 2 DEG. AT 4408 FT. DEG. AT FT. DEG. AT FT.                       |  |               |       |       |        |       |        |      |           |                    |                  | DEG. AT FT. DEG. AT FT. DEG. AT FT.                              |  |  |  |  |  |  |  |  |  |  |  | DEG. AT FT. DEG. AT FT. DEG. AT FT.                                        |  |  |  |  |  |  |  |  |  |  |  |  |
| DRILL STEM TESTS   |  | NO. INTERVAL FORMATION                                           |  |               |       |       |        |       |        |      |           |                    |                  | NO. INTERVAL FORMATION                                           |  |  |  |  |  |  |  |  |  |  |  | NO. INTERVAL FORMATION                                                     |  |  |  |  |  |  |  |  |  |  |  |  |
|                    |  | VALVE OPEN (MINS.) INITIAL SHUT-IN (MINS.) FINAL SHUT-IN (MINS.) |  |               |       |       |        |       |        |      |           |                    |                  | VALVE OPEN (MINS.) INITIAL SHUT-IN (MINS.) FINAL SHUT-IN (MINS.) |  |  |  |  |  |  |  |  |  |  |  | VALVE OPEN (MINS.) 60 INITIAL SHUT-IN (MINS.) 45 FINAL SHUT-IN (MINS.) 130 |  |  |  |  |  |  |  |  |  |  |  |  |
|                    |  | GAS TO SURFACE MIN. @ MCF/D MAX.                                 |  |               |       |       |        |       |        |      |           |                    |                  | GAS TO SURFACE MIN. @ MCF/D MAX.                                 |  |  |  |  |  |  |  |  |  |  |  | GAS TO SURFACE 3 MIN. @ 2.06 MCF/D MAX.                                    |  |  |  |  |  |  |  |  |  |  |  |  |
|                    |  | OIL TO SURFACE MIN. @ BBL/D MAX.                                 |  |               |       |       |        |       |        |      |           |                    |                  | OIL TO SURFACE MIN. @ BBL/D MAX.                                 |  |  |  |  |  |  |  |  |  |  |  | OIL TO SURFACE MIN. @ BBL/D MAX.                                           |  |  |  |  |  |  |  |  |  |  |  |  |
|                    |  | RECOVERY:                                                        |  |               |       |       |        |       |        |      |           |                    |                  | RECOVERY:                                                        |  |  |  |  |  |  |  |  |  |  |  | RECOVERY: No Recovery                                                      |  |  |  |  |  |  |  |  |  |  |  |  |
|                    |  | PRESSURES (PSI): HP FP ISIP FSIP                                 |  |               |       |       |        |       |        |      |           |                    |                  | PRESSURES (PSI): HP FP ISIP FSIP                                 |  |  |  |  |  |  |  |  |  |  |  | PRESSURES (PSI): HP 2208 2208 FP 528 624 ISIP 1632 FSIP 1632               |  |  |  |  |  |  |  |  |  |  |  |  |
| REMARKS INCLUDING: |  | FROM TO DESCRIPTION OF WORK                                      |  |               |       |       |        |       |        |      |           |                    |                  | FROM TO DESCRIPTION OF WORK                                      |  |  |  |  |  |  |  |  |  |  |  | FROM TO DESCRIPTION OF WORK                                                |  |  |  |  |  |  |  |  |  |  |  |  |
|                    |  | 12:00 12:15 Rig Service                                          |  |               |       |       |        |       |        |      |           |                    |                  | 8:00 9:15 Run in w/Bit #6 & Clean 1' to Bottom                   |  |  |  |  |  |  |  |  |  |  |  | 4:00 4:30 Circ Wait To Test Rig Service                                    |  |  |  |  |  |  |  |  |  |  |  |  |
|                    |  | 12:15 5:45 Drilg 7 1/8 hole                                      |  |               |       |       |        |       |        |      |           |                    |                  | 9:15 9:30 Rig Service & Pre-rams Hydr. Kelly Lock                |  |  |  |  |  |  |  |  |  |  |  | 9:30 10:15 10 STD Dummy Trip                                               |  |  |  |  |  |  |  |  |  |  |  |  |
|                    |  | 5:45 6:00 Summary                                                |  |               |       |       |        |       |        |      |           |                    |                  | 9:30 10:15 Drilg 1 1/8 Hole                                      |  |  |  |  |  |  |  |  |  |  |  | 10:15 10:45 Circ To Test                                                   |  |  |  |  |  |  |  |  |  |  |  |  |
|                    |  | 6:00 7:30 Hoist bit #5                                           |  |               |       |       |        |       |        |      |           |                    |                  | 10:15 11:15 Circ Sample @ 4416                                   |  |  |  |  |  |  |  |  |  |  |  | 11:45 12:00 Hoist To Test                                                  |  |  |  |  |  |  |  |  |  |  |  |  |
|                    |  | 7:30 7:45 Check Rams                                             |  |               |       |       |        |       |        |      |           |                    |                  | 11:15 1:15 Drilg 1 1/8 Hole                                      |  |  |  |  |  |  |  |  |  |  |  |                                                                            |  |  |  |  |  |  |  |  |  |  |  |  |
|                    |  | 7:45 8:00 Run down w/ bit #6                                     |  |               |       |       |        |       |        |      |           |                    |                  | 1:15 4:00 Circ Wait To Test                                      |  |  |  |  |  |  |  |  |  |  |  |                                                                            |  |  |  |  |  |  |  |  |  |  |  |  |
| CEMENTING          |  |                                                                  |  |               |       |       |        |       |        |      |           |                    |                  |                                                                  |  |  |  |  |  |  |  |  |  |  |  |                                                                            |  |  |  |  |  |  |  |  |  |  |  |  |
| LOGGING            |  |                                                                  |  |               |       |       |        |       |        |      |           |                    |                  |                                                                  |  |  |  |  |  |  |  |  |  |  |  |                                                                            |  |  |  |  |  |  |  |  |  |  |  |  |
| PERFORATING        |  |                                                                  |  |               |       |       |        |       |        |      |           |                    |                  |                                                                  |  |  |  |  |  |  |  |  |  |  |  |                                                                            |  |  |  |  |  |  |  |  |  |  |  |  |
| ACIDIZING          |  |                                                                  |  |               |       |       |        |       |        |      |           |                    |                  |                                                                  |  |  |  |  |  |  |  |  |  |  |  |                                                                            |  |  |  |  |  |  |  |  |  |  |  |  |
| FRACTURING         |  |                                                                  |  |               |       |       |        |       |        |      |           |                    |                  |                                                                  |  |  |  |  |  |  |  |  |  |  |  |                                                                            |  |  |  |  |  |  |  |  |  |  |  |  |
| PLUGS              |  |                                                                  |  |               |       |       |        |       |        |      |           |                    |                  |                                                                  |  |  |  |  |  |  |  |  |  |  |  |                                                                            |  |  |  |  |  |  |  |  |  |  |  |  |
| DRILLER            |  | G. J. Coleman                                                    |  |               |       |       |        |       |        |      |           |                    |                  | DRILLER                                                          |  |  |  |  |  |  |  |  |  |  |  | B. J. Coleman                                                              |  |  |  |  |  |  |  |  |  |  |  |  |
|                    |  | NO. HELPERS 4                                                    |  |               |       |       |        |       |        |      |           |                    |                  | NO. HELPERS 4                                                    |  |  |  |  |  |  |  |  |  |  |  | NO. HELPERS 4                                                              |  |  |  |  |  |  |  |  |  |  |  |  |

DATE Feb 10 / 68

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|                    |  |                                                                  |  |  |  |  |  |  |  |  |  |                                                                  |  |               |                  |       |  |       |  |        |  |                                                                  |  |        |  |      |  |           |  |                    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|--------------------|--|------------------------------------------------------------------|--|--|--|--|--|--|--|--|--|------------------------------------------------------------------|--|---------------|------------------|-------|--|-------|--|--------|--|------------------------------------------------------------------|--|--------|--|------|--|-----------|--|--------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| WELL NAME          |  | H.B. Cameron Hills A5-60-10-117-30W                              |  |  |  |  |  |  |  |  |  | LDG. FLG. TO KB                                                  |  | CASING RECORD |                  | DEPTH |  | SIZE  |  | WEIGHT |  | GRADE                                                            |  | CEMENT |  | ACID |  | PLUG DOWN |  | COMPANY SUPERVISOR |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CONTRACTOR         |  | S+T Drilling Co. Ltd                                             |  |  |  |  |  |  |  |  |  | K. B. ELEV.                                                      |  | RECORD        |                  | 826   |  | 8 3/4 |  | 24"    |  | I-55                                                             |  | 4658AX |  |      |  | 26/1/68   |  | Cliff J...         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| RIG NO.            |  | 1/E                                                              |  |  |  |  |  |  |  |  |  | GRD. ELEV.                                                       |  |               |                  |       |  |       |  |        |  |                                                                  |  |        |  |      |  |           |  |                    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 12 P.M. TO 8 A.M.  |  |                                                                  |  |  |  |  |  |  |  |  |  |                                                                  |  |               | 8 A.M. TO 4 P.M. |       |  |       |  |        |  |                                                                  |  |        |  |      |  |           |  | 4 P.M. TO 12 P.M.  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| DEPTH              |  | START 2490 PROGRESS 177' END 3667                                |  |  |  |  |  |  |  |  |  | START 3667 PROGRESS 112' END 3779                                |  |               |                  |       |  |       |  |        |  | START 3779 PROGRESS 170' END 3949                                |  |        |  |      |  |           |  |                    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| BIT RECORD         |  | NO. SERIAL NO. TYPE SIZE FROM TO FOOTAGE HRS. RUN                |  |  |  |  |  |  |  |  |  | NO. SERIAL NO. TYPE SIZE FROM TO FOOTAGE HRS. RUN                |  |               |                  |       |  |       |  |        |  | NO. SERIAL NO. TYPE SIZE FROM TO FOOTAGE HRS. RUN                |  |        |  |      |  |           |  |                    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                    |  | 4 50725 SAT 7 1/8 2925 3667 742 31 3/4                           |  |  |  |  |  |  |  |  |  | 4 50725 7 1/8 SAT 2925 3779 852 36 1/4                           |  |               |                  |       |  |       |  |        |  | 5 94086 ORG 1 1/8 3779 3949 170' 7 1/8                           |  |        |  |      |  |           |  |                    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                    |  |                                                                  |  |  |  |  |  |  |  |  |  | 5 94086 1 1/8 ORG 3779                                           |  |               |                  |       |  |       |  |        |  |                                                                  |  |        |  |      |  |           |  |                    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| DRILLING DATA      |  | LINER SIZE PUMP PRESSURE TABLE SPEED WEIGHT ON BIT               |  |  |  |  |  |  |  |  |  | LINER SIZE PUMP PRESSURE TABLE SPEED WEIGHT ON BIT               |  |               |                  |       |  |       |  |        |  | LINER SIZE PUMP PRESSURE TABLE SPEED WEIGHT ON BIT               |  |        |  |      |  |           |  |                    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                    |  | 5 1/2 x 14" 1450 80 36m                                          |  |  |  |  |  |  |  |  |  | 5 1/2 x 14" 1450 90 36m                                          |  |               |                  |       |  |       |  |        |  | 5 1/2 x 14" 600 90 35                                            |  |        |  |      |  |           |  |                    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| DRILLING STRING    |  | SIZE STANDS SINGLES DRILL COL. KELLY IN CORE BBL.                |  |  |  |  |  |  |  |  |  | SIZE STANDS SINGLES DRILL COL. KELLY IN CORE BBL.                |  |               |                  |       |  |       |  |        |  | SIZE STANDS SINGLES DRILL COL. KELLY IN CORE BBL.                |  |        |  |      |  |           |  |                    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                    |  | 4" 31 2 23 22'                                                   |  |  |  |  |  |  |  |  |  | 4" 32 2 23 41'                                                   |  |               |                  |       |  |       |  |        |  | 4" 34 2 23 22'                                                   |  |        |  |      |  |           |  |                    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| MUD RECORD         |  | TYPE OF MUD WEIGHT VIS WL PH FC                                  |  |  |  |  |  |  |  |  |  | TYPE OF MUD WEIGHT VIS WL PH FC                                  |  |               |                  |       |  |       |  |        |  | TYPE OF MUD WEIGHT VIS WL PH FC                                  |  |        |  |      |  |           |  |                    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                    |  | 9.3 36                                                           |  |  |  |  |  |  |  |  |  | 9.3 45                                                           |  |               |                  |       |  |       |  |        |  | 9.2 40                                                           |  |        |  |      |  |           |  |                    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                    |  | 9.3 38                                                           |  |  |  |  |  |  |  |  |  | 9.3 45                                                           |  |               |                  |       |  |       |  |        |  | 9.2 40                                                           |  |        |  |      |  |           |  |                    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                    |  | ADDITIVES Del 5700"                                              |  |  |  |  |  |  |  |  |  | ADDITIVES 2                                                      |  |               |                  |       |  |       |  |        |  | ADDITIVES Del 2300"                                              |  |        |  |      |  |           |  |                    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CORING             |  | NO. FROM TO RECOVERED FORMATION                                  |  |  |  |  |  |  |  |  |  | NO. FROM TO RECOVERED FORMATION                                  |  |               |                  |       |  |       |  |        |  | NO. FROM TO RECOVERED FORMATION                                  |  |        |  |      |  |           |  |                    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                    |  |                                                                  |  |  |  |  |  |  |  |  |  |                                                                  |  |               |                  |       |  |       |  |        |  |                                                                  |  |        |  |      |  |           |  |                    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| SURVEY             |  | 1/2 DEG. AT 3560 FT. DEG. AT FT. DEG. AT FT.                     |  |  |  |  |  |  |  |  |  | 3/4 DEG. AT 3775 FT. DEG. AT FT. DEG. AT FT.                     |  |               |                  |       |  |       |  |        |  | 1/2 DEG. AT FT. DEG. AT FT. DEG. AT FT.                          |  |        |  |      |  |           |  |                    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| DRILL STEM TESTS   |  | NO. INTERVAL FORMATION                                           |  |  |  |  |  |  |  |  |  | NO. INTERVAL FORMATION                                           |  |               |                  |       |  |       |  |        |  | NO. INTERVAL FORMATION                                           |  |        |  |      |  |           |  |                    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                    |  | VALVE OPEN (MINS.) INITIAL SHUT-IN (MINS.) FINAL SHUT-IN (MINS.) |  |  |  |  |  |  |  |  |  | VALVE OPEN (MINS.) INITIAL SHUT-IN (MINS.) FINAL SHUT-IN (MINS.) |  |               |                  |       |  |       |  |        |  | VALVE OPEN (MINS.) INITIAL SHUT-IN (MINS.) FINAL SHUT-IN (MINS.) |  |        |  |      |  |           |  |                    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                    |  | GAS TO SURFACE MIN. @ MCF/D MAX.                                 |  |  |  |  |  |  |  |  |  | GAS TO SURFACE MIN. @ MCF/D MAX.                                 |  |               |                  |       |  |       |  |        |  | GAS TO SURFACE MIN. @ MCF/D MAX.                                 |  |        |  |      |  |           |  |                    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                    |  | OIL TO SURFACE MIN. @ BBL/D MAX.                                 |  |  |  |  |  |  |  |  |  | OIL TO SURFACE MIN. @ BBL/D MAX.                                 |  |               |                  |       |  |       |  |        |  | OIL TO SURFACE MIN. @ BBL/D MAX.                                 |  |        |  |      |  |           |  |                    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                    |  | RECOVERY:                                                        |  |  |  |  |  |  |  |  |  | RECOVERY:                                                        |  |               |                  |       |  |       |  |        |  | RECOVERY:                                                        |  |        |  |      |  |           |  |                    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                    |  | PRESSURES (PSI): HP FP ISIP FSIP                                 |  |  |  |  |  |  |  |  |  | PRESSURES (PSI): HP FP ISIP FSIP                                 |  |               |                  |       |  |       |  |        |  | PRESSURES (PSI): HP FP ISIP FSIP                                 |  |        |  |      |  |           |  |                    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| REMARKS INCLUDING: |  | FROM TO DESCRIPTION OF WORK                                      |  |  |  |  |  |  |  |  |  | FROM TO DESCRIPTION OF WORK                                      |  |               |                  |       |  |       |  |        |  | FROM TO DESCRIPTION OF WORK                                      |  |        |  |      |  |           |  |                    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                    |  | 12" 12'15" Rig Service                                           |  |  |  |  |  |  |  |  |  | 8'00 8'15 Rig Service ✓ PDS RAMS, HYDRIL 5' KENX CCK             |  |               |                  |       |  |       |  |        |  | 4'00 4'15 CLEAN 25' TO BOTTOM                                    |  |        |  |      |  |           |  |                    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                    |  | 12'15 3'00 Drilling 7 1/8 hole                                   |  |  |  |  |  |  |  |  |  | 8'15 12'45 Drilling 7 1/8 hole                                   |  |               |                  |       |  |       |  |        |  | 4'15 4'30 Rig Service                                            |  |        |  |      |  |           |  |                    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                    |  | 3'00 3'15 Survey @ 3560 1/2"                                     |  |  |  |  |  |  |  |  |  | 12'45 1'00 SURVEY @ 3775 - 3/4"                                  |  |               |                  |       |  |       |  |        |  | 4'30 12'00 Drilling 7 1/8 hole                                   |  |        |  |      |  |           |  |                    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                    |  | 2'15 8'00 Drilling 7 1/8 hole                                    |  |  |  |  |  |  |  |  |  | 1'00 2'30 STRAP OUT 1/2 BIT #4                                   |  |               |                  |       |  |       |  |        |  |                                                                  |  |        |  |      |  |           |  |                    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                    |  |                                                                  |  |  |  |  |  |  |  |  |  | 2'30 SHIP 23' OF DRILL LINE - CHANGE OIL IN #1                   |  |               |                  |       |  |       |  |        |  |                                                                  |  |        |  |      |  |           |  |                    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                    |  |                                                                  |  |  |  |  |  |  |  |  |  | 3'00 3'00 LIGHT PLANT - CLEAN TANKS                              |  |               |                  |       |  |       |  |        |  |                                                                  |  |        |  |      |  |           |  |                    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                    |  |                                                                  |  |  |  |  |  |  |  |  |  | 3'00 4'00 Run in 1/2 BIT #5                                      |  |               |                  |       |  |       |  |        |  |                                                                  |  |        |  |      |  |           |  |                    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| DRILLER            |  | D.L. Cameron                                                     |  |  |  |  |  |  |  |  |  | DRILLER                                                          |  |               |                  |       |  |       |  |        |  | DRILLER                                                          |  |        |  |      |  |           |  |                    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| NO. HELPERS        |  | 4                                                                |  |  |  |  |  |  |  |  |  | 4                                                                |  |               |                  |       |  |       |  |        |  | 4                                                                |  |        |  |      |  |           |  |                    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

DAILY DRILLERS REPORT

Hudson's Bay Oil and Gas Company Limited

DATE FEB 8/68

|            |                                   |                 |              |               |       |       |        |       |         |      |           |                    |
|------------|-----------------------------------|-----------------|--------------|---------------|-------|-------|--------|-------|---------|------|-----------|--------------------|
| WELL NAME  | HB CAMERON HILLS A5-60-10-117-30W | LDG. FLG. TO KB |              | CASING RECORD | DEPTH | SIZE  | WEIGHT | GRADE | CEMENT  | ACID | PLUG DOWN | COMPANY SUPERVISOR |
| CONTRACTOR | S&T DRILLING                      | TYPE RIG        | NAT 50 A/E/0 | K. B. ELEV.   | 826   | 8 5/8 | 24     | J-55  | 465 SAK |      | FEB 1/68  |                    |
| RIG NO.    | 1E                                | TOOL PUSHER     | W. S. Harris | GRD. ELEV.    |       |       |        |       |         |      |           | Chiff J. Jones     |

|            |                   |            |      |       |          |      |         |          |     |            |                  |       |       |      |         |          |          |            |      |       |                   |      |         |          |       |            |      |      |          |    |         |          |     |  |      |  |
|------------|-------------------|------------|------|-------|----------|------|---------|----------|-----|------------|------------------|-------|-------|------|---------|----------|----------|------------|------|-------|-------------------|------|---------|----------|-------|------------|------|------|----------|----|---------|----------|-----|--|------|--|
|            | 12 P.M. TO 8 A.M. |            |      |       |          |      |         |          |     |            | 8 A.M. TO 4 P.M. |       |       |      |         |          |          |            |      |       | 4 P.M. TO 12 P.M. |      |         |          |       |            |      |      |          |    |         |          |     |  |      |  |
| DEPTH      | START             |            | 2951 |       | PROGRESS |      | 170     |          | END |            | 3121             |       | START |      | 3121    |          | PROGRESS |            | 174' |       | END               |      | 3295    |          | START |            | 3295 |      | PROGRESS |    | 195'    |          | END |  | 3490 |  |
| BIT RECORD | NO.               | SERIAL NO. | TYPE | SIZE  | FROM     | TO   | FOOTAGE | HRS. RUN | NO. | SERIAL NO. | TYPE             | SIZE  | FROM  | TO   | FOOTAGE | HRS. RUN | NO.      | SERIAL NO. | TYPE | SIZE  | FROM              | TO   | FOOTAGE | HRS. RUN | NO.   | SERIAL NO. | TYPE | SIZE | FROM     | TO | FOOTAGE | HRS. RUN |     |  |      |  |
|            | 4                 | 50725      | S&T  | 7 1/8 | 2925     | 3125 | 196     | 9        | 4   | 50725      | S&T              | 7 1/8 | 2925  | 3295 | 370     | 16 3/4   | 4        | 50725      | S&T  | 7 1/8 | 2925              | 3490 | 565     | 24 1/4   |       |            |      |      |          |    |         |          |     |  |      |  |

|               |            |               |             |               |            |               |             |               |            |               |             |               |
|---------------|------------|---------------|-------------|---------------|------------|---------------|-------------|---------------|------------|---------------|-------------|---------------|
| DRILLING DATA | LINER SIZE | PUMP PRESSURE | TABLE SPEED | WEIGHT ON BIT | LINER SIZE | PUMP PRESSURE | TABLE SPEED | WEIGHT ON BIT | LINER SIZE | PUMP PRESSURE | TABLE SPEED | WEIGHT ON BIT |
|               | 5 1/2      | 1400          | 80          | 36            | 5 1/2      | 1425          | 80          | 36m           | 5 1/2 X 19 | 1420          | 80-90       | 36m           |

|                 |      |        |         |            |          |           |      |        |         |            |          |           |      |        |         |            |          |           |
|-----------------|------|--------|---------|------------|----------|-----------|------|--------|---------|------------|----------|-----------|------|--------|---------|------------|----------|-----------|
| DRILLING STRING | SIZE | STANDS | SINGLES | DRILL COL. | KELLY IN | CORE BBL. | SIZE | STANDS | SINGLES | DRILL COL. | KELLY IN | CORE BBL. | SIZE | STANDS | SINGLES | DRILL COL. | KELLY IN | CORE BBL. |
|                 | 4    | 25     | 2       | 23         | 41.3'    |           | 4    | 27     | 2       | 23         | 26'      |           | 4    | 29     | 2       | 23         | 34'      |           |

|            |             |            |     |    |    |    |             |           |           |    |    |    |             |        |           |           |    |    |  |  |
|------------|-------------|------------|-----|----|----|----|-------------|-----------|-----------|----|----|----|-------------|--------|-----------|-----------|----|----|--|--|
| MUD RECORD | TYPE OF MUD | WEIGHT     | VIS | WL | PH | FC | TYPE OF MUD | WEIGHT    | VIS       | WL | PH | FC | TYPE OF MUD | WEIGHT | VIS       | WL        | PH | FC |  |  |
|            |             | 9.0        | 34  |    |    |    |             | 9.2       | 37        |    |    |    |             | 9.1    | 38        |           |    |    |  |  |
|            |             | 9.1        | 38  |    |    |    |             |           |           |    |    |    |             | 9.1    | 40        |           |    |    |  |  |
|            | ADDITIVES   | Gel - 3500 |     |    |    |    |             | ADDITIVES | Gel 1100# |    |    |    |             |        | ADDITIVES | Gel 1500# |    |    |  |  |

|        |     |      |    |           |           |     |      |    |           |           |     |      |    |           |           |
|--------|-----|------|----|-----------|-----------|-----|------|----|-----------|-----------|-----|------|----|-----------|-----------|
| CORING | NO. | FROM | TO | RECOVERED | FORMATION | NO. | FROM | TO | RECOVERED | FORMATION | NO. | FROM | TO | RECOVERED | FORMATION |
|        |     |      |    |           |           |     |      |    |           |           |     |      |    |           |           |

|        |         |     |         |     |         |     |         |     |         |     |         |     |         |     |
|--------|---------|-----|---------|-----|---------|-----|---------|-----|---------|-----|---------|-----|---------|-----|
| SURVEY | DEG. AT | FT. | DEG. AT | FT. | DEG. AT | FT. | DEG. AT | FT. | DEG. AT | FT. | DEG. AT | FT. | DEG. AT | FT. |
|        |         |     |         |     |         |     |         |     |         |     |         |     |         |     |

|                  |                    |          |           |                         |          |           |                       |          |           |                    |  |  |                         |  |  |                       |  |  |                  |  |  |  |  |  |  |  |  |
|------------------|--------------------|----------|-----------|-------------------------|----------|-----------|-----------------------|----------|-----------|--------------------|--|--|-------------------------|--|--|-----------------------|--|--|------------------|--|--|--|--|--|--|--|--|
| DRILL STEM TESTS | NO.                | INTERVAL | FORMATION | NO.                     | INTERVAL | FORMATION | NO.                   | INTERVAL | FORMATION |                    |  |  |                         |  |  |                       |  |  |                  |  |  |  |  |  |  |  |  |
|                  | VALVE OPEN (MINS.) |          |           | INITIAL SHUT-IN (MINS.) |          |           | FINAL SHUT-IN (MINS.) |          |           | VALVE OPEN (MINS.) |  |  | INITIAL SHUT-IN (MINS.) |  |  | FINAL SHUT-IN (MINS.) |  |  |                  |  |  |  |  |  |  |  |  |
|                  | GAS TO SURFACE     |          |           | MIN. @                  |          |           | MCF/D MAX.            |          |           | GAS TO SURFACE     |  |  | MIN. @                  |  |  | MCF/D MAX.            |  |  |                  |  |  |  |  |  |  |  |  |
|                  | OIL TO SURFACE     |          |           | MIN. @                  |          |           | BBL/D MAX.            |          |           | OIL TO SURFACE     |  |  | MIN. @                  |  |  | BBL/D MAX.            |  |  |                  |  |  |  |  |  |  |  |  |
|                  | RECOVERY:          |          |           |                         |          |           |                       |          |           | RECOVERY:          |  |  |                         |  |  |                       |  |  | RECOVERY:        |  |  |  |  |  |  |  |  |
|                  | PRESSURES (PSI):   |          |           |                         |          |           |                       |          |           | PRESSURES (PSI):   |  |  |                         |  |  |                       |  |  | PRESSURES (PSI): |  |  |  |  |  |  |  |  |

|                                                                                               |                  |                  |                     |                 |                 |                                |                 |                  |                                |
|-----------------------------------------------------------------------------------------------|------------------|------------------|---------------------|-----------------|-----------------|--------------------------------|-----------------|------------------|--------------------------------|
| REMARKS INCLUDING:<br>CEMENTING<br>LOGGING<br>PERFORATING<br>ACIDIZING<br>FRACTURING<br>PLUGS | FROM             | TO               | DESCRIPTION OF WORK | FROM            | TO              | DESCRIPTION OF WORK            | FROM            | TO               | DESCRIPTION OF WORK            |
|                                                                                               | 12 <sup>00</sup> | 12 <sup>15</sup> | RIG SERVICE         | 8 <sup>00</sup> | 8 <sup>15</sup> | Rig Service, 100% + Kelly cock | 4 <sup>00</sup> | 4 <sup>15</sup>  | RIG SERVICE Clean Suction Tank |
|                                                                                               | 12 <sup>15</sup> | 8 <sup>00</sup>  | DRILL 7 1/8 HOLE    | 8 <sup>15</sup> | 4 <sup>00</sup> | DRILL 7 1/8 hole               | 4 <sup>15</sup> | 4 <sup>45</sup>  | DRILL 7 1/8 HOLE               |
|                                                                                               |                  |                  |                     |                 |                 |                                | 4 <sup>45</sup> | 5 <sup>00</sup>  | W.L. SURVEY @ 3300' - 1/2"     |
|                                                                                               |                  |                  |                     |                 |                 |                                | 5 <sup>00</sup> | 12 <sup>00</sup> | DRILL 7 1/8 HOLE               |
|                                                                                               |                  |                  |                     |                 |                 |                                |                 |                  |                                |

|         |              |             |   |         |               |             |  |         |              |             |   |
|---------|--------------|-------------|---|---------|---------------|-------------|--|---------|--------------|-------------|---|
| DRILLER | B. Armstrong | NO. HELPERS | 4 | DRILLER | G. L. Glerius | NO. HELPERS |  | DRILLER | W. S. Harris | NO. HELPERS | 4 |
|---------|--------------|-------------|---|---------|---------------|-------------|--|---------|--------------|-------------|---|



## Hudson's Bay Oil and Gas Company Limited

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| WELL NAME          |  | LDG FLG. TO KB                           |            | CASING RECORD      | DEPTH | SIZE                    | WEIGHT | GRADE                 | CEMENT   | ACID PLUG DOWN | COMPANY SUPERVISOR |                                      |       |                         |      |                       |          |                                        |            |               |       |                    |      |                         |          |                       |  |                  |  |                     |  |     |  |      |  |      |  |
|--------------------|--|------------------------------------------|------------|--------------------|-------|-------------------------|--------|-----------------------|----------|----------------|--------------------|--------------------------------------|-------|-------------------------|------|-----------------------|----------|----------------------------------------|------------|---------------|-------|--------------------|------|-------------------------|----------|-----------------------|--|------------------|--|---------------------|--|-----|--|------|--|------|--|
| CONTRACTOR         |  | TYPE RIG                                 |            |                    | ELEV. |                         |        |                       |          |                |                    |                                      |       |                         |      |                       |          |                                        |            |               |       |                    |      |                         |          |                       |  |                  |  |                     |  |     |  |      |  |      |  |
| RIG NO.            |  | TOOL PUSHER                              |            | GRD ELEV.          |       |                         |        |                       |          |                |                    |                                      |       |                         |      |                       |          |                                        |            |               |       |                    |      |                         |          |                       |  |                  |  |                     |  |     |  |      |  |      |  |
| 12 P.M. TO 8 A.M.  |  |                                          |            |                    |       |                         |        |                       |          |                |                    | 8 A.M. TO 4 P.M.                     |       |                         |      |                       |          |                                        |            |               |       |                    |      | 4 P.M. TO 12 P.M.       |          |                       |  |                  |  |                     |  |     |  |      |  |      |  |
| DEPTH              |  | START                                    |            | PROGRESS           |       | END                     |        | START                 |          | PROGRESS       |                    | END                                  |       | START                   |      | PROGRESS              |          | END                                    |            |               |       |                    |      |                         |          |                       |  |                  |  |                     |  |     |  |      |  |      |  |
| BIT RECORD         |  | NO.                                      | SERIAL NO. | TYPE               | SIZE  | FROM                    | TO     | FOOTAGE               | HRS. RUN | NO.            | SERIAL NO.         | TYPE                                 | SIZE  | FROM                    | TO   | FOOTAGE               | HRS. RUN | NO.                                    | SERIAL NO. | TYPE          | SIZE  | FROM               | TO   | FOOTAGE                 | HRS. RUN |                       |  |                  |  |                     |  |     |  |      |  |      |  |
|                    |  | 3                                        | 94493      | XIG                | 7 7/8 | 2376                    | 2805   | 429                   | 16 1/4   | 3              | 94493              | XIG                                  | 7 7/8 | 2376                    | 2892 | 516                   | 23 3/4   | 3                                      | 94493      | XIG           | 7 7/8 | 2376               | 2925 | 549                     | 26 3/4   |                       |  |                  |  |                     |  |     |  |      |  |      |  |
|                    |  |                                          |            |                    |       |                         |        |                       |          |                |                    |                                      |       |                         |      |                       |          | A                                      | 50125      | SAT           | 5 7/8 | 2925               | 2951 | 26                      | 1 1/4    |                       |  |                  |  |                     |  |     |  |      |  |      |  |
| DRILLING DATA      |  | LINER SIZE                               |            | PUMP PRESSURE      |       | TABLE SPEED             |        | WEIGHT ON BIT         |          | LINER SIZE     |                    | PUMP PRESSURE                        |       | TABLE SPEED             |      | WEIGHT ON BIT         |          | LINER SIZE                             |            | PUMP PRESSURE |       | TABLE SPEED        |      | WEIGHT ON BIT           |          |                       |  |                  |  |                     |  |     |  |      |  |      |  |
|                    |  | 5 X 14                                   |            | 400                |       | 80                      |        | 36                    |          | 5" + 5 1/2"    |                    | 400-950                              |       | 95 - 80                 |      | 24m - 36m             |          | 5 1/2"                                 |            | 950           |       | 80                 |      | 36                      |          |                       |  |                  |  |                     |  |     |  |      |  |      |  |
| DRILLING STRING    |  | SIZE                                     |            | STANDS             |       | SINGLES                 |        | DRILL COL.            |          | KELLY IN       |                    | CORE BBL.                            |       | SIZE                    |      | STANDS                |          | SINGLES                                |            | DRILL COL.    |       | KELLY IN           |      | CORE BBL.               |          |                       |  |                  |  |                     |  |     |  |      |  |      |  |
|                    |  | 4                                        |            | 23                 |       |                         |        | 21                    |          | 34.83          |                    |                                      |       | 4                       |      | 24                    |          |                                        |            | 21            |       | 26'                |      |                         |          |                       |  |                  |  |                     |  |     |  |      |  |      |  |
| MUD RECORD         |  | TYPE OF MUD                              |            | WEIGHT             |       | VIS                     |        | WL                    |          | PH             |                    | FC                                   |       | TYPE OF MUD             |      | WEIGHT                |          | VIS                                    |            | WL            |       | PH                 |      | FC                      |          |                       |  |                  |  |                     |  |     |  |      |  |      |  |
|                    |  |                                          |            | 9.0                |       | 39                      |        |                       |          |                |                    |                                      |       |                         |      | 9.4                   |          | 41                                     |            |               |       |                    |      |                         |          |                       |  |                  |  |                     |  |     |  |      |  |      |  |
|                    |  |                                          |            | 9.4                |       | 35                      |        |                       |          |                |                    |                                      |       |                         |      |                       |          | 8.9                                    |            | 34            |       |                    |      |                         |          |                       |  |                  |  |                     |  |     |  |      |  |      |  |
|                    |  | ADDITIVES GEL - 3200<br>SAWDUST - 10 SAY |            |                    |       |                         |        |                       |          |                |                    |                                      |       | ADDITIVES Gel 3500"     |      |                       |          |                                        |            |               |       |                    |      |                         |          | ADDITIVES             |  |                  |  |                     |  |     |  |      |  |      |  |
| CORING             |  | NO.                                      |            | FROM               |       | TO                      |        | RECOVERED             |          | FORMATION      |                    | NO.                                  |       | FROM                    |      | TO                    |          | RECOVERED                              |            | FORMATION     |       | NO.                |      | FROM                    |          | TO                    |  | RECOVERED        |  | FORMATION           |  |     |  |      |  |      |  |
|                    |  |                                          |            |                    |       |                         |        |                       |          |                |                    |                                      |       |                         |      |                       |          |                                        |            |               |       |                    |      |                         |          |                       |  |                  |  |                     |  |     |  |      |  |      |  |
| SURVEY             |  | 1 1/4 DEG. AT                            |            | 2770 FT.           |       | DEG. AT                 |        | FT.                   |          | DEG. AT        |                    | FT.                                  |       | 1 DEG. AT               |      | 2843 FT.              |          | DEG. AT                                |            | FT.           |       | DEG. AT            |      | FT.                     |          | DEG. AT               |  | FT.              |  | DEG. AT             |  | FT. |  |      |  |      |  |
| DRILL STEM TESTS   |  | NO.                                      |            | INTERVAL           |       | FORMATION               |        | NO.                   |          | INTERVAL       |                    | FORMATION                            |       | NO.                     |      | INTERVAL              |          | FORMATION                              |            | NO.           |       | INTERVAL           |      | FORMATION               |          | NO.                   |  | INTERVAL         |  | FORMATION           |  |     |  |      |  |      |  |
|                    |  |                                          |            | VALVE OPEN (MINS.) |       | INITIAL SHUT-IN (MINS.) |        | FINAL SHUT-IN (MINS.) |          |                |                    | VALVE OPEN (MINS.)                   |       | INITIAL SHUT-IN (MINS.) |      | FINAL SHUT-IN (MINS.) |          |                                        |            |               |       | VALVE OPEN (MINS.) |      | INITIAL SHUT-IN (MINS.) |          | FINAL SHUT-IN (MINS.) |  |                  |  |                     |  |     |  |      |  |      |  |
|                    |  |                                          |            | GAS TO SURFACE     |       | MIN. @                  |        | MCF/D MAX.            |          |                |                    | GAS TO SURFACE                       |       | MIN. @                  |      | MCF/D MAX.            |          |                                        |            |               |       | GAS TO SURFACE     |      | MIN. @                  |          | MCF/D MAX.            |  |                  |  |                     |  |     |  |      |  |      |  |
|                    |  |                                          |            | OIL TO SURFACE     |       | MIN. @                  |        | BBL/D MAX.            |          |                |                    | OIL TO SURFACE                       |       | MIN. @                  |      | BBL/D MAX.            |          |                                        |            |               |       | OIL TO SURFACE     |      | MIN. @                  |          | BBL/D MAX.            |  |                  |  |                     |  |     |  |      |  |      |  |
|                    |  |                                          |            | RECOVERY:          |       |                         |        |                       |          |                |                    | RECOVERY:                            |       |                         |      |                       |          |                                        |            |               |       | RECOVERY:          |      |                         |          |                       |  |                  |  |                     |  |     |  |      |  |      |  |
|                    |  |                                          |            | PRESSURES (PSI):   |       | HP                      |        | FP                    |          | ISIP           |                    | FSIP                                 |       |                         |      | PRESSURES (PSI):      |          | HP                                     |            | FP            |       | ISIP               |      | FSIP                    |          |                       |  | PRESSURES (PSI): |  | HP                  |  | FP  |  | ISIP |  | FSIP |  |
| REMARKS INCLUDING: |  | FROM                                     |            | TO                 |       | DESCRIPTION OF WORK     |        | FROM                  |          | TO             |                    | DESCRIPTION OF WORK                  |       | FROM                    |      | TO                    |          | DESCRIPTION OF WORK                    |            | FROM          |       | TO                 |      | DESCRIPTION OF WORK     |          | FROM                  |  | TO               |  | DESCRIPTION OF WORK |  |     |  |      |  |      |  |
|                    |  | 12 00                                    |            | 12 15              |       | RIG SERVICE             |        | 8 00                  |          | 8 15           |                    | Rig Service, 1 B.O.P.'s & Kelly cock |       | 4 00                    |      | 4 30                  |          | RIG SERVICE - CLEAN SUCTION            |            |               |       |                    |      |                         |          |                       |  |                  |  |                     |  |     |  |      |  |      |  |
|                    |  | 12 15                                    |            | 6 00               |       | DRILL 7 7/8 HOLE        |        | 8 15                  |          | 11 30          |                    | DRILL 7 7/8 HOLE                     |       |                         |      | 4 30                  |          | TANK                                   |            |               |       |                    |      |                         |          |                       |  |                  |  |                     |  |     |  |      |  |      |  |
|                    |  | 6 00                                     |            | 6 15               |       | WL SURVEY               |        | 11 30                 |          | 11 45          |                    | Survey @ 2843-1°                     |       |                         |      | 6 00                  |          | DRILL 7 7/8 HOLE                       |            |               |       |                    |      |                         |          |                       |  |                  |  |                     |  |     |  |      |  |      |  |
|                    |  | 6 15                                     |            | 8 00               |       | DRILL 7 7/8 HOLE        |        | 11 45                 |          | 4 00           |                    | DRILL 7 7/8 HOLE                     |       |                         |      | 6 15                  |          | CLEAN PUMP SUCTIONS & STRAINER SCREENS |            |               |       |                    |      |                         |          |                       |  |                  |  |                     |  |     |  |      |  |      |  |
|                    |  |                                          |            |                    |       |                         |        |                       |          |                |                    |                                      |       |                         |      | 6 15                  |          | DRILL 7 7/8 HOLE                       |            |               |       |                    |      |                         |          |                       |  |                  |  |                     |  |     |  |      |  |      |  |
|                    |  |                                          |            |                    |       |                         |        |                       |          |                |                    |                                      |       |                         |      | 7 45                  |          | TRIP OUT                               |            |               |       |                    |      |                         |          |                       |  |                  |  |                     |  |     |  |      |  |      |  |
|                    |  |                                          |            |                    |       |                         |        |                       |          |                |                    |                                      |       |                         |      | 9 00                  |          | v BLIND RAMS                           |            |               |       |                    |      |                         |          |                       |  |                  |  |                     |  |     |  |      |  |      |  |
|                    |  |                                          |            |                    |       |                         |        |                       |          |                |                    |                                      |       |                         |      | 9 15                  |          | Pick Up 2 DC. CLEAN TANKS              |            |               |       |                    |      |                         |          |                       |  |                  |  |                     |  |     |  |      |  |      |  |
|                    |  |                                          |            |                    |       |                         |        |                       |          |                |                    |                                      |       |                         |      | 9 45                  |          | Run In Hole CLEAN 20' to Bottom        |            |               |       |                    |      |                         |          |                       |  |                  |  |                     |  |     |  |      |  |      |  |
|                    |  |                                          |            |                    |       |                         |        |                       |          |                |                    |                                      |       |                         |      | 10 45                 |          | DRILL 7 7/8 HOLE                       |            |               |       |                    |      |                         |          |                       |  |                  |  |                     |  |     |  |      |  |      |  |
| DRILLER            |  | B Armstrong                              |            | NO. HELPERS        |       | 3                       |        | DRILLER               |          | J. L. Plummer  |                    | NO. HELPERS                          |       | 4                       |      | DRILLER               |          | C. D. Dabner                           |            | NO. HELPERS   |       | 4                  |      |                         |          |                       |  |                  |  |                     |  |     |  |      |  |      |  |

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|                                                                             |  |                                                                  |  |  |  |  |  |  |  |  |  |                                                                  |  |               |  |       |      |        |         |        |      |                                                                  |                    |                   |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------------------------------------------------|--|------------------------------------------------------------------|--|--|--|--|--|--|--|--|--|------------------------------------------------------------------|--|---------------|--|-------|------|--------|---------|--------|------|------------------------------------------------------------------|--------------------|-------------------|--|--|--|--|--|--|--|--|--|--|--|
| WELL NAME                                                                   |  | H3 CAMERON HILLS AS-60-10-117-30 W                               |  |  |  |  |  |  |  |  |  | LDG. FLG. TO KB                                                  |  | CASING RECORD |  | DEPTH | SIZE | WEIGHT | GRADE   | CEMENT | ACID | PLUG DOWN                                                        | COMPANY SUPERVISOR |                   |  |  |  |  |  |  |  |  |  |  |  |
| CONTRACTOR                                                                  |  | S-T DRILLING                                                     |  |  |  |  |  |  |  |  |  | K. B. ELEV.                                                      |  | 826           |  | 8 5/8 | 24   | J-55   | 465 SAX |        |      | FEB 1/68                                                         |                    |                   |  |  |  |  |  |  |  |  |  |  |  |
| RIG NO.                                                                     |  | 1E                                                               |  |  |  |  |  |  |  |  |  | TOOL PUSHER                                                      |  |               |  |       |      |        |         |        |      |                                                                  |                    | C. H. James       |  |  |  |  |  |  |  |  |  |  |  |
| 12 P.M. TO 8 A.M.                                                           |  |                                                                  |  |  |  |  |  |  |  |  |  | 8 A.M. TO 4 P.M.                                                 |  |               |  |       |      |        |         |        |      |                                                                  |                    | 4 P.M. TO 12 P.M. |  |  |  |  |  |  |  |  |  |  |  |
| DEPTH                                                                       |  | START 2249 PROGRESS 78 END 2327                                  |  |  |  |  |  |  |  |  |  | START 2327 PROGRESS 80' END 2407                                 |  |               |  |       |      |        |         |        |      | START 2407 PROGRESS 232 END 2639                                 |                    |                   |  |  |  |  |  |  |  |  |  |  |  |
| BIT RECORD                                                                  |  | NO. SERIAL NO. TYPE SIZE FROM TO FOOTAGE HRS. RUN                |  |  |  |  |  |  |  |  |  | NO. SERIAL NO. TYPE SIZE FROM TO FOOTAGE HRS. RUN                |  |               |  |       |      |        |         |        |      | NO. SERIAL NO. TYPE SIZE FROM TO FOOTAGE HRS. RUN                |                    |                   |  |  |  |  |  |  |  |  |  |  |  |
|                                                                             |  | 2 89566 XIG 7 7/8 1753 2327 574 37 3/4                           |  |  |  |  |  |  |  |  |  | 2 89566 XIG 7 7/8 1753 2376 623 42                               |  |               |  |       |      |        |         |        |      | 3 94493 XIG 7 7/8 2376 2639 263 8 3/4                            |                    |                   |  |  |  |  |  |  |  |  |  |  |  |
|                                                                             |  |                                                                  |  |  |  |  |  |  |  |  |  | 3 94493 XIG 7 7/8 2376 2407 31' 1                                |  |               |  |       |      |        |         |        |      |                                                                  |                    |                   |  |  |  |  |  |  |  |  |  |  |  |
| DRILLING DATA                                                               |  | LINER SIZE PUMP PRESSURE TABLE SPEED WEIGHT ON BIT               |  |  |  |  |  |  |  |  |  | LINER SIZE PUMP PRESSURE TABLE SPEED WEIGHT ON BIT               |  |               |  |       |      |        |         |        |      | LINER SIZE PUMP PRESSURE TABLE SPEED WEIGHT ON BIT               |                    |                   |  |  |  |  |  |  |  |  |  |  |  |
|                                                                             |  | 5 300 75 35M                                                     |  |  |  |  |  |  |  |  |  | 5" x 14" 80 34-36M                                               |  |               |  |       |      |        |         |        |      | 5X14 600 80 36                                                   |                    |                   |  |  |  |  |  |  |  |  |  |  |  |
| DRILLING STRING                                                             |  | SIZE STANDS SINGLES DRILL COL. KELLY IN CORE BBL.                |  |  |  |  |  |  |  |  |  | SIZE STANDS SINGLES DRILL COL. KELLY IN CORE BBL.                |  |               |  |       |      |        |         |        |      | SIZE STANDS SINGLES DRILL COL. KELLY IN CORE BBL.                |                    |                   |  |  |  |  |  |  |  |  |  |  |  |
|                                                                             |  | 4 18 21 23.66                                                    |  |  |  |  |  |  |  |  |  | 4" 18 2 21 41'                                                   |  |               |  |       |      |        |         |        |      | 4 21 1 21 25'                                                    |                    |                   |  |  |  |  |  |  |  |  |  |  |  |
| MUD RECORD                                                                  |  | TYPE OF MUD WEIGHT VIS WL PH FC                                  |  |  |  |  |  |  |  |  |  | TYPE OF MUD WEIGHT VIS WL PH FC                                  |  |               |  |       |      |        |         |        |      | TYPE OF MUD WEIGHT VIS WL PH FC                                  |                    |                   |  |  |  |  |  |  |  |  |  |  |  |
|                                                                             |  | 8.9 39                                                           |  |  |  |  |  |  |  |  |  | 92 42                                                            |  |               |  |       |      |        |         |        |      | 8.9 40                                                           |                    |                   |  |  |  |  |  |  |  |  |  |  |  |
|                                                                             |  | 8.9 40                                                           |  |  |  |  |  |  |  |  |  | 9.0 38                                                           |  |               |  |       |      |        |         |        |      | 9.0 40                                                           |                    |                   |  |  |  |  |  |  |  |  |  |  |  |
|                                                                             |  | ADDITIVES GEL - 5600#                                            |  |  |  |  |  |  |  |  |  | ADDITIVES Sawdust 20 SAXS                                        |  |               |  |       |      |        |         |        |      | ADDITIVES Sawdust 20 SAXS                                        |                    |                   |  |  |  |  |  |  |  |  |  |  |  |
|                                                                             |  | Sawdust - 65 SAX                                                 |  |  |  |  |  |  |  |  |  |                                                                  |  |               |  |       |      |        |         |        |      | Gel 1000                                                         |                    |                   |  |  |  |  |  |  |  |  |  |  |  |
| CORING                                                                      |  | NO. FROM TO RECOVERED FORMATION                                  |  |  |  |  |  |  |  |  |  | NO. FROM TO RECOVERED FORMATION                                  |  |               |  |       |      |        |         |        |      | NO. FROM TO RECOVERED FORMATION                                  |                    |                   |  |  |  |  |  |  |  |  |  |  |  |
|                                                                             |  |                                                                  |  |  |  |  |  |  |  |  |  |                                                                  |  |               |  |       |      |        |         |        |      |                                                                  |                    |                   |  |  |  |  |  |  |  |  |  |  |  |
| SURVEY                                                                      |  | DEG. AT FT. DEG. AT FT. DEG. AT FT.                              |  |  |  |  |  |  |  |  |  | 1/2 DEG. AT 2376 FT. DEG. AT FT. DEG. AT FT.                     |  |               |  |       |      |        |         |        |      | DEG. AT FT. DEG. AT FT. DEG. AT FT.                              |                    |                   |  |  |  |  |  |  |  |  |  |  |  |
| DRILL STEM TESTS                                                            |  | NO. INTERVAL FORMATION                                           |  |  |  |  |  |  |  |  |  | NO. INTERVAL FORMATION                                           |  |               |  |       |      |        |         |        |      | NO. INTERVAL FORMATION                                           |                    |                   |  |  |  |  |  |  |  |  |  |  |  |
|                                                                             |  | VALVE OPEN (MINS.) INITIAL SHUT-IN (MINS.) FINAL SHUT-IN (MINS.) |  |  |  |  |  |  |  |  |  | VALVE OPEN (MINS.) INITIAL SHUT-IN (MINS.) FINAL SHUT-IN (MINS.) |  |               |  |       |      |        |         |        |      | VALVE OPEN (MINS.) INITIAL SHUT-IN (MINS.) FINAL SHUT-IN (MINS.) |                    |                   |  |  |  |  |  |  |  |  |  |  |  |
|                                                                             |  | GAS TO SURFACE MIN. @ MCF/D MAX.                                 |  |  |  |  |  |  |  |  |  | GAS TO SURFACE MIN. @ MCF/D MAX.                                 |  |               |  |       |      |        |         |        |      | GAS TO SURFACE MIN. @ MCF/D MAX.                                 |                    |                   |  |  |  |  |  |  |  |  |  |  |  |
|                                                                             |  | OIL TO SURFACE MIN. @ BBL/D MAX.                                 |  |  |  |  |  |  |  |  |  | OIL TO SURFACE MIN. @ BBL/D MAX.                                 |  |               |  |       |      |        |         |        |      | OIL TO SURFACE MIN. @ BBL/D MAX.                                 |                    |                   |  |  |  |  |  |  |  |  |  |  |  |
|                                                                             |  | RECOVERY:                                                        |  |  |  |  |  |  |  |  |  | RECOVERY:                                                        |  |               |  |       |      |        |         |        |      | RECOVERY:                                                        |                    |                   |  |  |  |  |  |  |  |  |  |  |  |
|                                                                             |  | PRESSURES (PSI): HP FP ISIP FSIP                                 |  |  |  |  |  |  |  |  |  | PRESSURES (PSI): HP FP ISIP FSIP                                 |  |               |  |       |      |        |         |        |      | PRESSURES (PSI): HP FP ISIP FSIP                                 |                    |                   |  |  |  |  |  |  |  |  |  |  |  |
| REMARKS INCLUDING: CEMENTING LOGGING PERFORATING ACIDIZING FRACTURING PLUGS |  | FROM TO DESCRIPTION OF WORK                                      |  |  |  |  |  |  |  |  |  | FROM TO DESCRIPTION OF WORK                                      |  |               |  |       |      |        |         |        |      | FROM TO DESCRIPTION OF WORK                                      |                    |                   |  |  |  |  |  |  |  |  |  |  |  |
|                                                                             |  | 1200 1245 MIX MUD - WORK TIGHT HOLE                              |  |  |  |  |  |  |  |  |  | 800 930 Drdg 7 7/8 hole                                          |  |               |  |       |      |        |         |        |      | 400 415 RIG SERVICE                                              |                    |                   |  |  |  |  |  |  |  |  |  |  |  |
|                                                                             |  | 1245 100 REGAIN CIRC - RIG SERVICE                               |  |  |  |  |  |  |  |  |  | 930 945 RIG SERVICE, 1 BOP's + Kelly cock                        |  |               |  |       |      |        |         |        |      | 415 1200 DRDG 7 7/8 HOLE                                         |                    |                   |  |  |  |  |  |  |  |  |  |  |  |
|                                                                             |  | 100 800 DRDG 7 7/8 HOLE                                          |  |  |  |  |  |  |  |  |  | 945 1220 Drdg 7 7/8 hole                                         |  |               |  |       |      |        |         |        |      |                                                                  |                    |                   |  |  |  |  |  |  |  |  |  |  |  |
|                                                                             |  |                                                                  |  |  |  |  |  |  |  |  |  | 1220 1245 Survey                                                 |  |               |  |       |      |        |         |        |      |                                                                  |                    |                   |  |  |  |  |  |  |  |  |  |  |  |
|                                                                             |  |                                                                  |  |  |  |  |  |  |  |  |  | 1245 145 Hoist lift #2                                           |  |               |  |       |      |        |         |        |      |                                                                  |                    |                   |  |  |  |  |  |  |  |  |  |  |  |
|                                                                             |  |                                                                  |  |  |  |  |  |  |  |  |  | 145 200 Slip 23' drdg line                                       |  |               |  |       |      |        |         |        |      |                                                                  |                    |                   |  |  |  |  |  |  |  |  |  |  |  |
|                                                                             |  |                                                                  |  |  |  |  |  |  |  |  |  | 200 215 Check behind Ramo                                        |  |               |  |       |      |        |         |        |      |                                                                  |                    |                   |  |  |  |  |  |  |  |  |  |  |  |
|                                                                             |  |                                                                  |  |  |  |  |  |  |  |  |  | 215 300 Run 3rd lift #3 (20' fill)                               |  |               |  |       |      |        |         |        |      |                                                                  |                    |                   |  |  |  |  |  |  |  |  |  |  |  |
|                                                                             |  |                                                                  |  |  |  |  |  |  |  |  |  | 300 400 Drdg 7 7/8 hole                                          |  |               |  |       |      |        |         |        |      |                                                                  |                    |                   |  |  |  |  |  |  |  |  |  |  |  |
|                                                                             |  | DRILLER B. Amstutz NO. HELPERS 3                                 |  |  |  |  |  |  |  |  |  | DRILLER M. P. Amstutz NO. HELPERS 4                              |  |               |  |       |      |        |         |        |      | DRILLER C. H. James NO. HELPERS 4                                |                    |                   |  |  |  |  |  |  |  |  |  |  |  |

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|                                                     |  |  |  |  |  |  |  |  |  |                                                                             |  |  |  |  |  |  |  |  |  |                                                                              |  |               |  |        |  |       |  |        |  |                                                                  |  |           |  |                    |  |                     |  |  |  |                             |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
|-----------------------------------------------------|--|--|--|--|--|--|--|--|--|-----------------------------------------------------------------------------|--|--|--|--|--|--|--|--|--|------------------------------------------------------------------------------|--|---------------|--|--------|--|-------|--|--------|--|------------------------------------------------------------------|--|-----------|--|--------------------|--|---------------------|--|--|--|-----------------------------|--|--|--|--|--|--|--|--|--|----------------------|--|--|--|--|--|--|--|--|--|
| WELL NAME <u>H.B. CAMERON HILLS A-60-10-117-30W</u> |  |  |  |  |  |  |  |  |  | LDG. FLG. TO KB <u>ELECTRIC</u>                                             |  |  |  |  |  |  |  |  |  | DEPTH                                                                        |  | SIZE          |  | WEIGHT |  | GRADE |  | CEMENT |  | ACID                                                             |  | PLUG DOWN |  | COMPANY SUPERVISOR |  |                     |  |  |  |                             |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
| CONTRACTOR <u>SAT DRILLING</u>                      |  |  |  |  |  |  |  |  |  | TYPE RIG <u>NAT SURFACE</u>                                                 |  |  |  |  |  |  |  |  |  | K. B. ELEV.                                                                  |  | CASING RECORD |  | 826    |  | 8 7/8 |  | 24     |  | J-55                                                             |  | 465 SAX   |  | FEB 1/68           |  | <u>CHH/Jacobsen</u> |  |  |  |                             |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
| RIG NO. <u>1E</u>                                   |  |  |  |  |  |  |  |  |  | TOOL PUSHER <u>W. Spence</u>                                                |  |  |  |  |  |  |  |  |  | GRD. ELEV.                                                                   |  |               |  |        |  |       |  |        |  |                                                                  |  |           |  |                    |  |                     |  |  |  |                             |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
| 12 P.M. TO 8 A.M.                                   |  |  |  |  |  |  |  |  |  | 8 A.M. TO 4 P.M.                                                            |  |  |  |  |  |  |  |  |  | 4 P.M. TO 12 P.M.                                                            |  |               |  |        |  |       |  |        |  |                                                                  |  |           |  |                    |  |                     |  |  |  |                             |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
| DEPTH                                               |  |  |  |  |  |  |  |  |  | START <u>2068</u> PROGRESS <u>21</u> END <u>2089</u>                        |  |  |  |  |  |  |  |  |  | START <u>2089</u> PROGRESS <u>84'</u> END <u>2173</u>                        |  |               |  |        |  |       |  |        |  | START <u>2173</u> PROGRESS <u>76'</u> END <u>2249</u>            |  |           |  |                    |  |                     |  |  |  |                             |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
| BIT RECORD                                          |  |  |  |  |  |  |  |  |  | NO. SERIAL NO. TYPE SIZE FROM TO FOOTAGE HRS. RUN                           |  |  |  |  |  |  |  |  |  | NO. SERIAL NO. TYPE SIZE FROM TO FOOTAGE HRS. RUN                            |  |               |  |        |  |       |  |        |  | NO. SERIAL NO. TYPE SIZE FROM TO FOOTAGE HRS. RUN                |  |           |  |                    |  |                     |  |  |  |                             |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
|                                                     |  |  |  |  |  |  |  |  |  | <u>2 89566 XIG 7 7/8 1753 2089 336 17 1/4</u>                               |  |  |  |  |  |  |  |  |  | <u>2 89566 XIG 7 7/8 1753 2173 420 24 1/4</u>                                |  |               |  |        |  |       |  |        |  | <u>2 89566 XIG 7 7/8 1753 2249 496 30 3/4</u>                    |  |           |  |                    |  |                     |  |  |  |                             |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
| DRILLING DATA                                       |  |  |  |  |  |  |  |  |  | LINER SIZE PUMP PRESSURE TABLE SPEED WEIGHT ON BIT                          |  |  |  |  |  |  |  |  |  | LINER SIZE PUMP PRESSURE TABLE SPEED WEIGHT ON BIT                           |  |               |  |        |  |       |  |        |  | LINER SIZE PUMP PRESSURE TABLE SPEED WEIGHT ON BIT               |  |           |  |                    |  |                     |  |  |  |                             |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
|                                                     |  |  |  |  |  |  |  |  |  | <u>5+5 1/2 850 70 34 M</u>                                                  |  |  |  |  |  |  |  |  |  | <u>5+5 1/2 850 75 35 M</u>                                                   |  |               |  |        |  |       |  |        |  | <u>5 5 1/2 900 75 36 - -</u>                                     |  |           |  |                    |  |                     |  |  |  |                             |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
| DRILLING STRINGS                                    |  |  |  |  |  |  |  |  |  | SIZE STANDS SINGLES DRILL COL. KELLY IN CORE BBL.                           |  |  |  |  |  |  |  |  |  | SIZE STANDS SINGLES DRILL COL. KELLY IN CORE BBL.                            |  |               |  |        |  |       |  |        |  | SIZE STANDS SINGLES DRILL COL. KELLY IN CORE BBL.                |  |           |  |                    |  |                     |  |  |  |                             |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
|                                                     |  |  |  |  |  |  |  |  |  | <u>4 15 1 21 34.70</u>                                                      |  |  |  |  |  |  |  |  |  | <u>4 16 1 21 25'</u>                                                         |  |               |  |        |  |       |  |        |  | <u>4 17 21 39.10</u>                                             |  |           |  |                    |  |                     |  |  |  |                             |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
| MUD RECORD                                          |  |  |  |  |  |  |  |  |  | TYPE OF MUD WEIGHT VIS WL PH FC                                             |  |  |  |  |  |  |  |  |  | TYPE OF MUD WEIGHT VIS WL PH FC                                              |  |               |  |        |  |       |  |        |  | TYPE OF MUD WEIGHT VIS WL PH FC                                  |  |           |  |                    |  |                     |  |  |  |                             |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
|                                                     |  |  |  |  |  |  |  |  |  | <u>8.7 40</u>                                                               |  |  |  |  |  |  |  |  |  | <u>8.8 45</u><br><u>8.9 42</u>                                               |  |               |  |        |  |       |  |        |  | <u>8.8 40</u><br><u>8.8 40</u>                                   |  |           |  |                    |  |                     |  |  |  |                             |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
|                                                     |  |  |  |  |  |  |  |  |  | ADDITIVES <u>GEL-8000</u><br><u>SANDUST-100 SAX</u><br><u>LINTEX-20 SAX</u> |  |  |  |  |  |  |  |  |  | ADDITIVES <u>Gel 1200#</u><br><u>Lintex 5 saxs</u><br><u>Sandust-35 saxs</u> |  |               |  |        |  |       |  |        |  | ADDITIVES <u>Gel 1000#</u><br><u>Sandust 50 sax.</u>             |  |           |  |                    |  |                     |  |  |  |                             |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
| CORING                                              |  |  |  |  |  |  |  |  |  | NO. FROM TO RECOVERED FORMATION                                             |  |  |  |  |  |  |  |  |  | NO. FROM TO RECOVERED FORMATION                                              |  |               |  |        |  |       |  |        |  | NO. FROM TO RECOVERED FORMATION                                  |  |           |  |                    |  |                     |  |  |  |                             |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
|                                                     |  |  |  |  |  |  |  |  |  |                                                                             |  |  |  |  |  |  |  |  |  |                                                                              |  |               |  |        |  |       |  |        |  |                                                                  |  |           |  |                    |  |                     |  |  |  |                             |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
| SURVEY                                              |  |  |  |  |  |  |  |  |  | DEG. AT FT. DEG. AT FT. DEG. AT FT.                                         |  |  |  |  |  |  |  |  |  | DEG. AT FT. DEG. AT FT. DEG. AT FT.                                          |  |               |  |        |  |       |  |        |  | DEG. AT FT. DEG. AT FT. DEG. AT FT.                              |  |           |  |                    |  |                     |  |  |  |                             |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
| DRILL STEM TESTS                                    |  |  |  |  |  |  |  |  |  | NO. INTERVAL FORMATION                                                      |  |  |  |  |  |  |  |  |  | NO. INTERVAL FORMATION                                                       |  |               |  |        |  |       |  |        |  | NO. INTERVAL FORMATION                                           |  |           |  |                    |  |                     |  |  |  |                             |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
|                                                     |  |  |  |  |  |  |  |  |  | VALVE OPEN (MINS.) INITIAL SHUT-IN (MINS.) FINAL SHUT-IN (MINS.)            |  |  |  |  |  |  |  |  |  | VALVE OPEN (MINS.) INITIAL SHUT-IN (MINS.) FINAL SHUT-IN (MINS.)             |  |               |  |        |  |       |  |        |  | VALVE OPEN (MINS.) INITIAL SHUT-IN (MINS.) FINAL SHUT-IN (MINS.) |  |           |  |                    |  |                     |  |  |  |                             |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
|                                                     |  |  |  |  |  |  |  |  |  | GAS TO SURFACE MIN. @ MCF/D MAX.                                            |  |  |  |  |  |  |  |  |  | GAS TO SURFACE MIN. @ MCF/D MAX.                                             |  |               |  |        |  |       |  |        |  | GAS TO SURFACE MIN. @ MCF/D MAX.                                 |  |           |  |                    |  |                     |  |  |  |                             |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
|                                                     |  |  |  |  |  |  |  |  |  | OIL TO SURFACE MIN. @ BBL/D MAX.                                            |  |  |  |  |  |  |  |  |  | OIL TO SURFACE MIN. @ BBL/D MAX.                                             |  |               |  |        |  |       |  |        |  | OIL TO SURFACE MIN. @ BBL/D MAX.                                 |  |           |  |                    |  |                     |  |  |  |                             |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
|                                                     |  |  |  |  |  |  |  |  |  | RECOVERY:                                                                   |  |  |  |  |  |  |  |  |  | RECOVERY:                                                                    |  |               |  |        |  |       |  |        |  | RECOVERY:                                                        |  |           |  |                    |  |                     |  |  |  |                             |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
|                                                     |  |  |  |  |  |  |  |  |  | PRESSURES (PSI): HP FP ISIP FSIP                                            |  |  |  |  |  |  |  |  |  | PRESSURES (PSI): HP FP ISIP FSIP                                             |  |               |  |        |  |       |  |        |  | PRESSURES (PSI): HP FP ISIP FSIP                                 |  |           |  |                    |  |                     |  |  |  |                             |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
| REMARKS INCLUDING:                                  |  |  |  |  |  |  |  |  |  | FROM TO DESCRIPTION OF WORK                                                 |  |  |  |  |  |  |  |  |  | FROM TO DESCRIPTION OF WORK                                                  |  |               |  |        |  |       |  |        |  | FROM TO DESCRIPTION OF WORK                                      |  |           |  |                    |  |                     |  |  |  |                             |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
|                                                     |  |  |  |  |  |  |  |  |  | <u>12'' 12' RIG SERVICE</u>                                                 |  |  |  |  |  |  |  |  |  | <u>8'' 8' 15" Rig Service, 180 p's + Kelly cocke</u>                         |  |               |  |        |  |       |  |        |  | <u>4'' 4' 30" Mix Lost Circ Material Pump Down</u>               |  |           |  |                    |  |                     |  |  |  |                             |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
|                                                     |  |  |  |  |  |  |  |  |  | <u>12' MIX MUD &amp; LOST CIRC MAT-RUN</u>                                  |  |  |  |  |  |  |  |  |  | <u>8' 15" 3' 15" Drillg 7 7/8 hole</u>                                       |  |               |  |        |  |       |  |        |  | <u>4' 30" REGAINED Circ Rig Service</u>                          |  |           |  |                    |  |                     |  |  |  |                             |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
|                                                     |  |  |  |  |  |  |  |  |  | <u>6' 15" IN-CLEAN 200' TO BOTTOM</u>                                       |  |  |  |  |  |  |  |  |  | <u>3' 15" Lost circ completely, mix</u>                                      |  |               |  |        |  |       |  |        |  | <u>4' 30" 11'' DRLG 7 7/8 HOLE</u>                               |  |           |  |                    |  |                     |  |  |  |                             |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
|                                                     |  |  |  |  |  |  |  |  |  | <u>6' 15" 8'' DRLG 7 7/8 HOLE</u>                                           |  |  |  |  |  |  |  |  |  | <u>4'' 4' mud &amp; lost circ material</u>                                   |  |               |  |        |  |       |  |        |  | <u>11'' Lost Circ @ 2249 - Mix Mud</u>                           |  |           |  |                    |  |                     |  |  |  |                             |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
|                                                     |  |  |  |  |  |  |  |  |  |                                                                             |  |  |  |  |  |  |  |  |  | <u>Lost Circ @ 2173'</u>                                                     |  |               |  |        |  |       |  |        |  | <u>12'' &amp; Lost Circ Material</u>                             |  |           |  |                    |  |                     |  |  |  |                             |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
| DRILLER <u>B. Armstrong</u>                         |  |  |  |  |  |  |  |  |  | NO. HELPERS <u>3</u>                                                        |  |  |  |  |  |  |  |  |  | DRILLER <u>MT. Clemens</u>                                                   |  |               |  |        |  |       |  |        |  | NO. HELPERS <u>4</u>                                             |  |           |  |                    |  |                     |  |  |  | DRILLER <u>CHH/Jacobsen</u> |  |  |  |  |  |  |  |  |  | NO. HELPERS <u>4</u> |  |  |  |  |  |  |  |  |  |

DATE FEB 4 1968

|                                                                             |  |                                                                     |  |  |  |  |  |  |  |  |  |                                                                  |  |               |  |             |      |        |       |        |      |                                                                  |                    |          |             |  |  |  |  |  |  |
|-----------------------------------------------------------------------------|--|---------------------------------------------------------------------|--|--|--|--|--|--|--|--|--|------------------------------------------------------------------|--|---------------|--|-------------|------|--------|-------|--------|------|------------------------------------------------------------------|--------------------|----------|-------------|--|--|--|--|--|--|
| WELL NAME                                                                   |  | H B CAMERON HILLS A5-60-10-117-30W                                  |  |  |  |  |  |  |  |  |  | LDG. FLG. TO KB                                                  |  | CASING RECORD |  | DEPTH       | SIZE | WEIGHT | GRADE | CEMENT | ACID | PLUG DOWN                                                        | COMPANY SUPERVISOR |          |             |  |  |  |  |  |  |
| CONTRACTOR                                                                  |  | S & T DRILLING                                                      |  |  |  |  |  |  |  |  |  | TYPE RIG                                                         |  | NAT 50 A E    |  | K. B. ELEV. |      | 826    | 8 3/8 | 24"    | J-55 | 465SAX                                                           |                    | FEB 1/68 | Cliff James |  |  |  |  |  |  |
| RIG NO.                                                                     |  | 1 E                                                                 |  |  |  |  |  |  |  |  |  | TOOL PUSHER                                                      |  | GRD. ELEV.    |  |             |      |        |       |        |      |                                                                  |                    |          |             |  |  |  |  |  |  |
|                                                                             |  | 12 P.M. TO 8 A.M.                                                   |  |  |  |  |  |  |  |  |  | 8 A.M. TO 4 P.M.                                                 |  |               |  |             |      |        |       |        |      | 4 P.M. TO 12 P.M.                                                |                    |          |             |  |  |  |  |  |  |
| DEPTH                                                                       |  | START 1880 PROGRESS 77 END 1957                                     |  |  |  |  |  |  |  |  |  | START 1957 PROGRESS 62' END 2025                                 |  |               |  |             |      |        |       |        |      | START 2025 PROGRESS 43' END 2068                                 |                    |          |             |  |  |  |  |  |  |
| BIT RECORD                                                                  |  | NO. SERIAL NO. TYPE SIZE FROM TO FOOTAGE HRS. RUN                   |  |  |  |  |  |  |  |  |  | NO. SERIAL NO. TYPE SIZE FROM TO FOOTAGE HRS. RUN                |  |               |  |             |      |        |       |        |      | NO. SERIAL NO. TYPE SIZE FROM TO FOOTAGE HRS. RUN                |                    |          |             |  |  |  |  |  |  |
|                                                                             |  | 2 89566 X16 7 7/8 1753 1957 204 5 3/4                               |  |  |  |  |  |  |  |  |  | 2 89566 X16 7 7/8 1753 2025 189 11 3/4                           |  |               |  |             |      |        |       |        |      | 2 89566 X16 7 7/8 1753 2068 315 15 1/2                           |                    |          |             |  |  |  |  |  |  |
| DRILLING DATA                                                               |  | LINER SIZE PUMP PRESSURE TABLE SPEED WEIGHT ON BIT                  |  |  |  |  |  |  |  |  |  | LINER SIZE PUMP PRESSURE TABLE SPEED WEIGHT ON BIT               |  |               |  |             |      |        |       |        |      | LINER SIZE PUMP PRESSURE TABLE SPEED WEIGHT ON BIT               |                    |          |             |  |  |  |  |  |  |
|                                                                             |  | 5 X 14 1/2 IN 300 75 32 M 5 X 5 1/2 850 70 34 M 5 X 5 1/2 850 70 34 |  |  |  |  |  |  |  |  |  |                                                                  |  |               |  |             |      |        |       |        |      |                                                                  |                    |          |             |  |  |  |  |  |  |
| DRILLING STRING                                                             |  | SIZE STANDS SINGLES DRILL COL. KELLY IN CORE BBL.                   |  |  |  |  |  |  |  |  |  | SIZE STANDS SINGLES DRILL COL. KELLY IN CORE BBL.                |  |               |  |             |      |        |       |        |      | SIZE STANDS SINGLES DRILL COL. KELLY IN CORE BBL.                |                    |          |             |  |  |  |  |  |  |
|                                                                             |  | 4 14 21 27.95 1 1/4 14 2 2 33' 2 15 1 21 13'                        |  |  |  |  |  |  |  |  |  |                                                                  |  |               |  |             |      |        |       |        |      |                                                                  |                    |          |             |  |  |  |  |  |  |
| MUD RECORD                                                                  |  | TYPE OF MUD WEIGHT VIS WL PH FC                                     |  |  |  |  |  |  |  |  |  | TYPE OF MUD WEIGHT VIS WL PH FC                                  |  |               |  |             |      |        |       |        |      | TYPE OF MUD WEIGHT VIS WL PH FC                                  |                    |          |             |  |  |  |  |  |  |
|                                                                             |  |                                                                     |  |  |  |  |  |  |  |  |  |                                                                  |  |               |  |             |      |        |       |        |      |                                                                  |                    |          |             |  |  |  |  |  |  |
|                                                                             |  | ADDITIVES GEL-5000# LINTEX-5 SAX SANDUST-115 SAX                    |  |  |  |  |  |  |  |  |  | ADDITIVES Gel 4300# Sandust 22 SAX Linex 9 SAX                   |  |               |  |             |      |        |       |        |      | ADDITIVES GEL-5000# LINTEX-5 SAX SANDUST-115 SAX                 |                    |          |             |  |  |  |  |  |  |
| CORING                                                                      |  | NO. FROM TO RECOVERED FORMATION                                     |  |  |  |  |  |  |  |  |  | NO. FROM TO RECOVERED FORMATION                                  |  |               |  |             |      |        |       |        |      | NO. FROM TO RECOVERED FORMATION                                  |                    |          |             |  |  |  |  |  |  |
|                                                                             |  |                                                                     |  |  |  |  |  |  |  |  |  |                                                                  |  |               |  |             |      |        |       |        |      |                                                                  |                    |          |             |  |  |  |  |  |  |
| SURVEY                                                                      |  | DEG. AT FT. DEG. AT FT. DEG. AT FT.                                 |  |  |  |  |  |  |  |  |  | DEG. AT FT. DEG. AT FT. DEG. AT FT.                              |  |               |  |             |      |        |       |        |      | 3/4 DEG. AT 2050 FT. DEG. AT FT. DEG. AT FT.                     |                    |          |             |  |  |  |  |  |  |
| DRILL STEM TESTS                                                            |  | NO. INTERVAL FORMATION                                              |  |  |  |  |  |  |  |  |  | NO. INTERVAL FORMATION                                           |  |               |  |             |      |        |       |        |      | NO. INTERVAL FORMATION                                           |                    |          |             |  |  |  |  |  |  |
|                                                                             |  | VALVE OPEN (MINS.) INITIAL SHUT-IN (MINS.) FINAL SHUT-IN (MINS.)    |  |  |  |  |  |  |  |  |  | VALVE OPEN (MINS.) INITIAL SHUT-IN (MINS.) FINAL SHUT-IN (MINS.) |  |               |  |             |      |        |       |        |      | VALVE OPEN (MINS.) INITIAL SHUT-IN (MINS.) FINAL SHUT-IN (MINS.) |                    |          |             |  |  |  |  |  |  |
|                                                                             |  | GAS TO SURFACE MIN. @ MCF/D MAX.                                    |  |  |  |  |  |  |  |  |  | GAS TO SURFACE MIN. @ MCF/D MAX.                                 |  |               |  |             |      |        |       |        |      | GAS TO SURFACE MIN. @ MCF/D MAX.                                 |                    |          |             |  |  |  |  |  |  |
|                                                                             |  | OIL TO SURFACE MIN. @ BBL/D MAX.                                    |  |  |  |  |  |  |  |  |  | OIL TO SURFACE MIN. @ BBL/D MAX.                                 |  |               |  |             |      |        |       |        |      | OIL TO SURFACE MIN. @ BBL/D MAX.                                 |                    |          |             |  |  |  |  |  |  |
|                                                                             |  | RECOVERY:                                                           |  |  |  |  |  |  |  |  |  | RECOVERY:                                                        |  |               |  |             |      |        |       |        |      | RECOVERY:                                                        |                    |          |             |  |  |  |  |  |  |
|                                                                             |  | PRESSURES (PSI): HP FP ISIP FSIP                                    |  |  |  |  |  |  |  |  |  | PRESSURES (PSI): HP FP ISIP FSIP                                 |  |               |  |             |      |        |       |        |      | PRESSURES (PSI): HP FP ISIP FSIP                                 |                    |          |             |  |  |  |  |  |  |
| REMARKS INCLUDING: CEMENTING LOGGING PERFORATING ACIDIZING FRACTURING PLUGS |  | FROM TO DESCRIPTION OF WORK                                         |  |  |  |  |  |  |  |  |  | FROM TO DESCRIPTION OF WORK                                      |  |               |  |             |      |        |       |        |      | FROM TO DESCRIPTION OF WORK                                      |                    |          |             |  |  |  |  |  |  |
|                                                                             |  | 1200 1230 DRUG 7 7/8 HOLE - GOOD RETURNS                            |  |  |  |  |  |  |  |  |  | 800 815 Rig Service + 80 p's                                     |  |               |  |             |      |        |       |        |      | 400 415 Rig Service                                              |                    |          |             |  |  |  |  |  |  |
|                                                                             |  | 1230 LOST CIRC 1901 - NO RETURNS                                    |  |  |  |  |  |  |  |  |  | 815 915 1 1/2" 7 7/8 hole                                        |  |               |  |             |      |        |       |        |      | 415 DRUG 7 7/8 HOLE - LOSING SOME                                |                    |          |             |  |  |  |  |  |  |
|                                                                             |  | MIXING MUD & LOST CIRC MAT                                          |  |  |  |  |  |  |  |  |  | 915 LOST CIRC @ 1970 no returns since                            |  |               |  |             |      |        |       |        |      | 700 MUD TO FORMATION                                             |                    |          |             |  |  |  |  |  |  |
|                                                                             |  | 245 245 PUMP AWAY APPROX 50 BBL'S - GOOD RET.                       |  |  |  |  |  |  |  |  |  | 1100 1100 small + lost circ material                             |  |               |  |             |      |        |       |        |      | 745 LOST CIRCULATION - BUILD VOLUME                              |                    |          |             |  |  |  |  |  |  |
|                                                                             |  | 245 300 DRUG 7 7/8 HOLE                                             |  |  |  |  |  |  |  |  |  | 1100 400 Regained Circ. 1 1/2" 7 7/8 hole                        |  |               |  |             |      |        |       |        |      | 745 MIX LOST CIRC MATERIAL - PUMP DOWN                           |                    |          |             |  |  |  |  |  |  |
|                                                                             |  | 300 315 RIG SERV                                                    |  |  |  |  |  |  |  |  |  |                                                                  |  |               |  |             |      |        |       |        |      | 745 DRUG 7 7/8 HOLE - LOSING SOME TO                             |                    |          |             |  |  |  |  |  |  |
|                                                                             |  | 315 345 DRUG 7 7/8 HOLE                                             |  |  |  |  |  |  |  |  |  |                                                                  |  |               |  |             |      |        |       |        |      | 845 FORMATION SURVEY                                             |                    |          |             |  |  |  |  |  |  |
|                                                                             |  | 345 LOST CIRC @ 1924 - MIX MUD & LOST                               |  |  |  |  |  |  |  |  |  |                                                                  |  |               |  |             |      |        |       |        |      | 845 900 LOST CIRC @ 2068 BUILD VOLUME MIX LOST CIRC MATERIAL     |                    |          |             |  |  |  |  |  |  |
|                                                                             |  | 630 CIRC MAT. - PUMP SAME                                           |  |  |  |  |  |  |  |  |  |                                                                  |  |               |  |             |      |        |       |        |      | 900 WORK TIGHT HOLE W/NO RETURNS PULL                            |                    |          |             |  |  |  |  |  |  |
|                                                                             |  | 630 800 DRUG 7 7/8 HOLE - GOOD RETURNS                              |  |  |  |  |  |  |  |  |  |                                                                  |  |               |  |             |      |        |       |        |      | 1045 6 STANDS CIRC W/GOOD RETURNS                                |                    |          |             |  |  |  |  |  |  |
|                                                                             |  | DRILLER B Ammons NO. HELPERS 3                                      |  |  |  |  |  |  |  |  |  | DRILLER L J. Collins NO. HELPERS 4                               |  |               |  |             |      |        |       |        |      | DRILLER J. T. DeLoach NO. HELPERS 4                              |                    |          |             |  |  |  |  |  |  |





DAILY DRILLERS REPORT

Hudson's Bay Oil and Gas Company Limited

DATE FEB 2/68

|            |                                           |                 |              |                  |             |      |        |       |        |        |           |                       |          |
|------------|-------------------------------------------|-----------------|--------------|------------------|-------------|------|--------|-------|--------|--------|-----------|-----------------------|----------|
| WELL NAME  | HUDSON BAY CAMERON HILLS AS-60-10-117-30W | LDG. FLG. TO KB |              | CASING<br>RECORD | DEPTH       | SIZE | WEIGHT | GRADE | CEMENT | ACID   | PLUG DOWN | COMPANY<br>SUPERVISOR |          |
| CONTRACTOR | S+T DRILLING                              | TYPE RIG        | NAT SOAE     |                  | K. B. ELEV. | 826  | 8 3/8  | 24#   | J-55   | 465000 |           |                       | Feb 1/68 |
| RIG NO.    | 1E                                        | TOOL PUSHER     | W. J. Harris |                  | GRD. ELEV.  |      |        |       |        |        |           |                       |          |

Cliff J...

|                                                                                                  |                    |            |                         |      |                     |           |                       |           |             |            |                    |                  |                         |          |           |          |                       |            |                                                                                                                                                            |       |                    |       |                         |                   |             |           |                       |  |               |  |     |  |                                                                                                                                                                                                                              |  |  |  |    |  |  |  |    |  |     |  |      |  |  |  |  |  |  |  |  |  |  |
|--------------------------------------------------------------------------------------------------|--------------------|------------|-------------------------|------|---------------------|-----------|-----------------------|-----------|-------------|------------|--------------------|------------------|-------------------------|----------|-----------|----------|-----------------------|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|--------------------|-------|-------------------------|-------------------|-------------|-----------|-----------------------|--|---------------|--|-----|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|----|--|--|--|----|--|-----|--|------|--|--|--|--|--|--|--|--|--|--|
| 12 P.M. TO 8 A.M.                                                                                |                    |            |                         |      |                     |           |                       |           |             |            |                    | 8 A.M. TO 4 P.M. |                         |          |           |          |                       |            |                                                                                                                                                            |       |                    |       |                         | 4 P.M. TO 12 P.M. |             |           |                       |  |               |  |     |  |                                                                                                                                                                                                                              |  |  |  |    |  |  |  |    |  |     |  |      |  |  |  |  |  |  |  |  |  |  |
| DEPTH                                                                                            | START              |            |                         |      | PROGRESS            |           |                       |           | END         |            |                    |                  | START                   | PROGRESS |           |          |                       | END        |                                                                                                                                                            |       |                    | START | PROGRESS                |                   |             |           | END                   |  |               |  |     |  |                                                                                                                                                                                                                              |  |  |  |    |  |  |  |    |  |     |  |      |  |  |  |  |  |  |  |  |  |  |
| BIT<br>RECORD                                                                                    | NO.                | SERIAL NO. | TYPE                    | SIZE | FROM                | TO        | FOOTAGE               | HRS. RUN  | NO.         | SERIAL NO. | TYPE               | SIZE             | FROM                    | TO       | FOOTAGE   | HRS. RUN | NO.                   | SERIAL NO. | TYPE                                                                                                                                                       | SIZE  | FROM               | TO    | FOOTAGE                 | HRS. RUN          |             |           |                       |  |               |  |     |  |                                                                                                                                                                                                                              |  |  |  |    |  |  |  |    |  |     |  |      |  |  |  |  |  |  |  |  |  |  |
|                                                                                                  |                    |            |                         |      |                     |           |                       |           | 1           | 94468      | XIG                | 7 1/8            |                         |          |           |          | 1                     | 94468      | XIG                                                                                                                                                        | 7 1/8 | 826                | 900   | 74                      | cleaning          |             |           |                       |  |               |  |     |  |                                                                                                                                                                                                                              |  |  |  |    |  |  |  |    |  |     |  |      |  |  |  |  |  |  |  |  |  |  |
|                                                                                                  |                    |            |                         |      |                     |           |                       |           |             |            |                    |                  |                         |          |           |          |                       |            |                                                                                                                                                            |       | 900                | 1276  | 376                     | 6 3/4             |             |           |                       |  |               |  |     |  |                                                                                                                                                                                                                              |  |  |  |    |  |  |  |    |  |     |  |      |  |  |  |  |  |  |  |  |  |  |
|                                                                                                  |                    |            |                         |      |                     |           |                       |           |             |            |                    |                  |                         |          |           |          |                       |            |                                                                                                                                                            |       |                    |       |                         |                   |             |           |                       |  |               |  |     |  |                                                                                                                                                                                                                              |  |  |  |    |  |  |  |    |  |     |  |      |  |  |  |  |  |  |  |  |  |  |
| DRILLING<br>DATA                                                                                 | LINER SIZE         |            |                         |      | PUMP PRESSURE       |           |                       |           | TABLE SPEED |            |                    |                  | WEIGHT ON BIT           |          |           |          | LINER SIZE            |            |                                                                                                                                                            |       | PUMP PRESSURE      |       |                         |                   | TABLE SPEED |           |                       |  | WEIGHT ON BIT |  |     |  |                                                                                                                                                                                                                              |  |  |  |    |  |  |  |    |  |     |  |      |  |  |  |  |  |  |  |  |  |  |
|                                                                                                  |                    |            |                         |      |                     |           |                       |           |             |            |                    |                  |                         |          |           |          | 5 1/2                 |            |                                                                                                                                                            |       | 1400               |       |                         |                   | 110         |           |                       |  | 18            |  |     |  |                                                                                                                                                                                                                              |  |  |  |    |  |  |  |    |  |     |  |      |  |  |  |  |  |  |  |  |  |  |
| DRILLING<br>STRING                                                                               | SIZE               |            | STANDS                  |      | SINGLES             |           | DRILL COL.            |           | KELLY IN    |            | CORE BBL.          |                  | SIZE                    |          | STANDS    |          | SINGLES               |            | DRILL COL.                                                                                                                                                 |       | KELLY IN           |       | CORE BBL.               |                   |             |           |                       |  |               |  |     |  |                                                                                                                                                                                                                              |  |  |  |    |  |  |  |    |  |     |  |      |  |  |  |  |  |  |  |  |  |  |
|                                                                                                  |                    |            |                         |      |                     |           |                       |           |             |            |                    |                  | 21                      |          |           |          |                       |            | 21                                                                                                                                                         |       | 32.81              |       |                         |                   |             |           |                       |  |               |  |     |  |                                                                                                                                                                                                                              |  |  |  |    |  |  |  |    |  |     |  |      |  |  |  |  |  |  |  |  |  |  |
| MUD<br>RECORD                                                                                    | TYPE OF MUD        |            |                         |      | WEIGHT              |           |                       |           | VIS         |            |                    |                  | WL                      |          |           |          | PH                    |            |                                                                                                                                                            |       | FC                 |       |                         |                   | TYPE OF MUD |           |                       |  | WEIGHT        |  |     |  | VIS                                                                                                                                                                                                                          |  |  |  | WL |  |  |  | PH |  |     |  | FC   |  |  |  |  |  |  |  |  |  |  |
|                                                                                                  |                    |            |                         |      |                     |           |                       |           |             |            |                    |                  |                         |          |           |          |                       |            |                                                                                                                                                            |       |                    |       |                         |                   | WATER       |           |                       |  | 8.4           |  |     |  | 28                                                                                                                                                                                                                           |  |  |  |    |  |  |  |    |  |     |  |      |  |  |  |  |  |  |  |  |  |  |
|                                                                                                  |                    |            |                         |      |                     |           |                       |           |             |            |                    |                  |                         |          |           |          |                       |            |                                                                                                                                                            |       |                    |       |                         |                   |             |           |                       |  | 8.4           |  |     |  | 28                                                                                                                                                                                                                           |  |  |  |    |  |  |  |    |  |     |  |      |  |  |  |  |  |  |  |  |  |  |
|                                                                                                  | ADDITIVES          |            |                         |      |                     |           |                       |           |             |            |                    |                  |                         |          |           |          |                       |            |                                                                                                                                                            |       |                    |       |                         |                   | ADDITIVES   |           |                       |  |               |  |     |  |                                                                                                                                                                                                                              |  |  |  |    |  |  |  |    |  |     |  |      |  |  |  |  |  |  |  |  |  |  |
| CORING                                                                                           | NO.                | FROM       |                         | TO   |                     | RECOVERED |                       | FORMATION |             | NO.        | FROM               |                  | TO                      |          | RECOVERED |          | FORMATION             |            | NO.                                                                                                                                                        | FROM  |                    | TO    |                         | RECOVERED         |             | FORMATION |                       |  |               |  |     |  |                                                                                                                                                                                                                              |  |  |  |    |  |  |  |    |  |     |  |      |  |  |  |  |  |  |  |  |  |  |
|                                                                                                  |                    |            |                         |      |                     |           |                       |           |             |            |                    |                  |                         |          |           |          |                       |            |                                                                                                                                                            |       |                    |       |                         |                   |             |           |                       |  |               |  |     |  |                                                                                                                                                                                                                              |  |  |  |    |  |  |  |    |  |     |  |      |  |  |  |  |  |  |  |  |  |  |
| SURVEY                                                                                           | DEG. AT            |            | FT.                     |      | DEG. AT             |           | FT.                   |           | DEG. AT     |            | FT.                |                  | DEG. AT                 |          | FT.       |          | DEG. AT               |            | FT.                                                                                                                                                        |       | DEG. AT            |       | FT.                     |                   | DEG. AT     |           | FT.                   |  |               |  |     |  |                                                                                                                                                                                                                              |  |  |  |    |  |  |  |    |  |     |  |      |  |  |  |  |  |  |  |  |  |  |
|                                                                                                  |                    |            |                         |      |                     |           |                       |           |             |            |                    |                  |                         |          |           |          |                       |            |                                                                                                                                                            |       |                    |       |                         |                   |             |           |                       |  |               |  |     |  |                                                                                                                                                                                                                              |  |  |  |    |  |  |  |    |  |     |  |      |  |  |  |  |  |  |  |  |  |  |
| DRILL<br>STEM<br>TESTS                                                                           | NO.                |            | INTERVAL                |      |                     |           | FORMATION             |           |             |            | NO.                |                  | INTERVAL                |          |           |          | FORMATION             |            |                                                                                                                                                            |       | NO.                |       | INTERVAL                |                   |             |           | FORMATION             |  |               |  |     |  |                                                                                                                                                                                                                              |  |  |  |    |  |  |  |    |  |     |  |      |  |  |  |  |  |  |  |  |  |  |
|                                                                                                  |                    |            |                         |      |                     |           |                       |           |             |            |                    |                  |                         |          |           |          |                       |            |                                                                                                                                                            |       |                    |       |                         |                   |             |           |                       |  |               |  |     |  |                                                                                                                                                                                                                              |  |  |  |    |  |  |  |    |  |     |  |      |  |  |  |  |  |  |  |  |  |  |
|                                                                                                  | VALVE OPEN (MINS.) |            | INITIAL SHUT-IN (MINS.) |      |                     |           | FINAL SHUT-IN (MINS.) |           |             |            | VALVE OPEN (MINS.) |                  | INITIAL SHUT-IN (MINS.) |          |           |          | FINAL SHUT-IN (MINS.) |            |                                                                                                                                                            |       | VALVE OPEN (MINS.) |       | INITIAL SHUT-IN (MINS.) |                   |             |           | FINAL SHUT-IN (MINS.) |  |               |  |     |  |                                                                                                                                                                                                                              |  |  |  |    |  |  |  |    |  |     |  |      |  |  |  |  |  |  |  |  |  |  |
|                                                                                                  | GAS TO SURFACE     |            | MIN. @                  |      |                     |           | MCF/D MAX.            |           |             |            | GAS TO SURFACE     |                  | MIN. @                  |          |           |          | MCF/D MAX.            |            |                                                                                                                                                            |       | GAS TO SURFACE     |       | MIN. @                  |                   |             |           | MCF/D MAX.            |  |               |  |     |  |                                                                                                                                                                                                                              |  |  |  |    |  |  |  |    |  |     |  |      |  |  |  |  |  |  |  |  |  |  |
|                                                                                                  | OIL TO SURFACE     |            | MIN. @                  |      |                     |           | BBL/D MAX.            |           |             |            | OIL TO SURFACE     |                  | MIN. @                  |          |           |          | BBL/D MAX.            |            |                                                                                                                                                            |       | OIL TO SURFACE     |       | MIN. @                  |                   |             |           | BBL/D MAX.            |  |               |  |     |  |                                                                                                                                                                                                                              |  |  |  |    |  |  |  |    |  |     |  |      |  |  |  |  |  |  |  |  |  |  |
|                                                                                                  | RECOVERY:          |            |                         |      |                     |           |                       |           |             |            | RECOVERY:          |                  |                         |          |           |          |                       |            |                                                                                                                                                            |       | RECOVERY:          |       |                         |                   |             |           |                       |  |               |  |     |  |                                                                                                                                                                                                                              |  |  |  |    |  |  |  |    |  |     |  |      |  |  |  |  |  |  |  |  |  |  |
| REMARKS<br>INCLUDING:<br>CEMENTING<br>LOGGING<br>PERFORATING<br>ACIDIZING<br>FRACTURING<br>PLUGS | FROM               |            | TO                      |      | DESCRIPTION OF WORK |           |                       |           |             |            |                    |                  |                         |          | FROM      |          | TO                    |            | DESCRIPTION OF WORK                                                                                                                                        |       |                    |       |                         |                   |             |           |                       |  | FROM          |  | TO  |  | DESCRIPTION OF WORK                                                                                                                                                                                                          |  |  |  |    |  |  |  |    |  |     |  |      |  |  |  |  |  |  |  |  |  |  |
|                                                                                                  | 1200               |            | 800                     |      | WOC                 |           |                       |           |             |            |                    |                  |                         |          | 800       |          | 400                   |            | W.O.C.<br>Finished hanging up<br>Checked and top shut off o.k.<br>press blind rams to 1500<br>press held o.k.<br>Run in w/ bit #1<br>picked up 10 man DC's |       |                    |       |                         |                   |             |           |                       |  | 400           |  | 415 |  | RIG SERVICE<br>PRESSURE PIPE RAMS & HYDRIL<br>To 1500 PSI HELD O.K.<br>DRKG 35' of CEMENT, DRKG OUT<br>CASING SHOES & CLEAN PILOT HOLE<br>To 900<br>DRKG 7 1/8 HOLE<br>TIGHTEN WASHPIPE PACKING ON SWIVEL<br>DRKG 7 1/8 HOLE |  |  |  |    |  |  |  |    |  | 630 |  | 1030 |  |  |  |  |  |  |  |  |  |  |

|         |              |             |   |         |              |             |   |         |              |             |   |
|---------|--------------|-------------|---|---------|--------------|-------------|---|---------|--------------|-------------|---|
| DRILLER | B. Armstrong | NO. HELPERS | 3 | DRILLER | M. J. Harris | NO. HELPERS | 4 | DRILLER | M. J. Harris | NO. HELPERS | 3 |
|---------|--------------|-------------|---|---------|--------------|-------------|---|---------|--------------|-------------|---|

## DAILY DRILLERS REPORT

Hudson's Bay Oil and Gas Company Limited

DATE FEB 1/68

|            |                                     |                 |              |             |       |      |        |       |        |      |           |                    |
|------------|-------------------------------------|-----------------|--------------|-------------|-------|------|--------|-------|--------|------|-----------|--------------------|
| WELL NAME  | H.B. CAMERON HILLS AS-60-10-117-30W | LDG. FLG. TO KB |              | CASING      | DEPTH | SIZE | WEIGHT | GRADE | CEMENT | ACID | PLUG DOWN | COMPANY SUPERVISOR |
| CONTRACTOR | S-T DRILLING                        | TYPE RIG        | NAT 50 RE    | K. B. ELEV. |       |      |        |       |        |      |           |                    |
| RIG NO.    | 1E                                  | TOOL PUSHER     | W. H. HARRIS | GRD. ELEV.  |       |      |        |       |        |      |           | Cliff J.           |

|                                                                                               |                    |                 |                                       |            |             |           |                       |                |                  |             |                    |      |                         |         |               |          |                       |            |               |      |                    |    |                         |                 |                     |  |                       |        |         |            |           |           |         |  |     |  |  |  |  |  |  |  |  |  |                 |                  |                     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------------------------------------------------------------------|--------------------|-----------------|---------------------------------------|------------|-------------|-----------|-----------------------|----------------|------------------|-------------|--------------------|------|-------------------------|---------|---------------|----------|-----------------------|------------|---------------|------|--------------------|----|-------------------------|-----------------|---------------------|--|-----------------------|--------|---------|------------|-----------|-----------|---------|--|-----|--|--|--|--|--|--|--|--|--|-----------------|------------------|---------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
|                                                                                               | 12 P.M. TO 8 A.M.  |                 |                                       |            |             |           |                       |                | 8 A.M. TO 4 P.M. |             |                    |      |                         |         |               |          | 4 P.M. TO 12 P.M.     |            |               |      |                    |    |                         |                 |                     |  |                       |        |         |            |           |           |         |  |     |  |  |  |  |  |  |  |  |  |                 |                  |                     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| DEPTH                                                                                         | START              |                 | PROGRESS                              |            |             |           | END                   |                | START            |             | PROGRESS           |      |                         |         | END           |          | START                 |            | PROGRESS      |      |                    |    | END                     |                 |                     |  |                       |        |         |            |           |           |         |  |     |  |  |  |  |  |  |  |  |  |                 |                  |                     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                               | NO.                | SERIAL NO.      | TYPE                                  | SIZE       | FROM        | TO        | FOOTAGE               | HRS. RUN       | NO.              | SERIAL NO.  | TYPE               | SIZE | FROM                    | TO      | FOOTAGE       | HRS. RUN | NO.                   | SERIAL NO. | TYPE          | SIZE | FROM               | TO | FOOTAGE                 | HRS. RUN        |                     |  |                       |        |         |            |           |           |         |  |     |  |  |  |  |  |  |  |  |  |                 |                  |                     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| BIT RECORD                                                                                    |                    |                 |                                       |            |             |           |                       |                |                  |             |                    |      |                         |         |               |          |                       |            |               |      |                    |    |                         |                 |                     |  |                       |        |         |            |           |           |         |  |     |  |  |  |  |  |  |  |  |  |                 |                  |                     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| DRILLING DATA                                                                                 | LINER SIZE         |                 | PUMP PRESSURE                         |            | TABLE SPEED |           | WEIGHT ON BIT         |                | LINER SIZE       |             | PUMP PRESSURE      |      | TABLE SPEED             |         | WEIGHT ON BIT |          | LINER SIZE            |            | PUMP PRESSURE |      | TABLE SPEED        |    | WEIGHT ON BIT           |                 |                     |  |                       |        |         |            |           |           |         |  |     |  |  |  |  |  |  |  |  |  |                 |                  |                     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| DRILLING STRING                                                                               | SIZE               | STANDS          | SINGLES                               | DRILL COL. | KELLY IN    | CORE BBL. |                       |                |                  |             |                    |      |                         | SIZE    | STANDS        | SINGLES  | DRILL COL.            | KELLY IN   | CORE BBL.     |      |                    |    |                         |                 |                     |  | SIZE                  | STANDS | SINGLES | DRILL COL. | KELLY IN  | CORE BBL. |         |  |     |  |  |  |  |  |  |  |  |  |                 |                  |                     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| MUD RECORD                                                                                    | TYPE OF MUD        |                 | WEIGHT                                |            | VIS         |           | WL                    |                | PH               |             | FC                 |      | TYPE OF MUD             |         | WEIGHT        |          | VIS                   |            | WL            |      | PH                 |    | FC                      |                 | TYPE OF MUD         |  | WEIGHT                |        | VIS     |            | WL        |           | PH      |  | FC  |  |  |  |  |  |  |  |  |  |                 |                  |                     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                               | ADDITIVES          |                 |                                       |            |             |           |                       |                | ADDITIVES        |             |                    |      |                         |         |               |          | ADDITIVES             |            |               |      |                    |    |                         |                 |                     |  |                       |        |         |            |           |           |         |  |     |  |  |  |  |  |  |  |  |  |                 |                  |                     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CORING                                                                                        | NO.                | FROM            | TO                                    | RECOVERED  | FORMATION   |           |                       |                |                  |             |                    |      |                         | NO.     | FROM          | TO       | RECOVERED             | FORMATION  |               |      |                    |    |                         |                 |                     |  | NO.                   | FROM   | TO      | RECOVERED  | FORMATION |           |         |  |     |  |  |  |  |  |  |  |  |  |                 |                  |                     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| SURVEY                                                                                        | DEG. AT            |                 | FT.                                   |            | DEG. AT     |           | FT.                   |                | DEG. AT          |             | FT.                |      | DEG. AT                 |         | FT.           |          | DEG. AT               |            | FT.           |      | DEG. AT            |    | FT.                     |                 | DEG. AT             |  | FT.                   |        | DEG. AT |            | FT.       |           | DEG. AT |  | FT. |  |  |  |  |  |  |  |  |  |                 |                  |                     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| DRILL STEM TESTS                                                                              | NO.                |                 | INTERVAL                              |            |             |           | FORMATION             |                |                  |             | NO.                |      | INTERVAL                |         |               |          | FORMATION             |            |               |      | NO.                |    | INTERVAL                |                 |                     |  | FORMATION             |        |         |            |           |           |         |  |     |  |  |  |  |  |  |  |  |  |                 |                  |                     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                               | VALVE OPEN (MINS.) |                 | INITIAL SHUT-IN (MINS.)               |            |             |           | FINAL SHUT-IN (MINS.) |                |                  |             | VALVE OPEN (MINS.) |      | INITIAL SHUT-IN (MINS.) |         |               |          | FINAL SHUT-IN (MINS.) |            |               |      | VALVE OPEN (MINS.) |    | INITIAL SHUT-IN (MINS.) |                 |                     |  | FINAL SHUT-IN (MINS.) |        |         |            |           |           |         |  |     |  |  |  |  |  |  |  |  |  |                 |                  |                     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                               | GAS TO SURFACE     |                 | MIN. @                                |            |             |           | MCF/D MAX.            |                |                  |             | GAS TO SURFACE     |      | MIN. @                  |         |               |          | MCF/D MAX.            |            |               |      | GAS TO SURFACE     |    | MIN. @                  |                 |                     |  | MCF/D MAX.            |        |         |            |           |           |         |  |     |  |  |  |  |  |  |  |  |  |                 |                  |                     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                               | OIL TO SURFACE     |                 | MIN. @                                |            |             |           | BBL/D MAX.            |                |                  |             | OIL TO SURFACE     |      | MIN. @                  |         |               |          | BBL/D MAX.            |            |               |      | OIL TO SURFACE     |    | MIN. @                  |                 |                     |  | BBL/D MAX.            |        |         |            |           |           |         |  |     |  |  |  |  |  |  |  |  |  |                 |                  |                     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                               | RECOVERY:          |                 |                                       |            |             |           |                       |                | RECOVERY:        |             |                    |      |                         |         |               |          | RECOVERY:             |            |               |      |                    |    |                         |                 |                     |  |                       |        |         |            |           |           |         |  |     |  |  |  |  |  |  |  |  |  |                 |                  |                     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                               | PRESSURES (PSI):   |                 | HP                                    |            | FP          |           | ISIP                  |                | FSIP             |             | PRESSURES (PSI):   |      | HP                      |         | FP            |          | ISIP                  |            | FSIP          |      | PRESSURES (PSI):   |    | HP                      |                 | FP                  |  | ISIP                  |        | FSIP    |            |           |           |         |  |     |  |  |  |  |  |  |  |  |  |                 |                  |                     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| REMARKS INCLUDING:<br>CEMENTING<br>LOGGING<br>PERFORATING<br>ACIDIZING<br>FRACTURING<br>PLUGS | FROM               | TO              | DESCRIPTION OF WORK                   |            |             |           |                       |                |                  |             |                    |      |                         |         |               |          |                       |            |               |      |                    |    | FROM                    | TO              | DESCRIPTION OF WORK |  |                       |        |         |            |           |           |         |  |     |  |  |  |  |  |  |  |  |  | FROM            | TO               | DESCRIPTION OF WORK |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                               | 12 <sup>00</sup>   | 1 <sup>30</sup> | THAW OUT KELLY HOSE & STD. PIPE       |            |             |           |                       |                |                  |             |                    |      |                         |         |               |          |                       |            |               |      |                    |    | 8 <sup>00</sup>         | 4 <sup>00</sup> | W.O.C.              |  |                       |        |         |            |           |           |         |  |     |  |  |  |  |  |  |  |  |  | 4 <sup>00</sup> | 12 <sup>00</sup> | W.O.C.              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                               | 1 <sup>30</sup>    | 3 <sup>30</sup> | FINISH RUNNING CSG.                   |            |             |           |                       |                |                  |             |                    |      |                         |         |               |          |                       |            |               |      |                    |    |                         |                 |                     |  |                       |        |         |            |           |           |         |  |     |  |  |  |  |  |  |  |  |  |                 |                  |                     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                               | 3 <sup>30</sup>    | 4 <sup>30</sup> | CIRC - RIG TO RUN CEMENT.             |            |             |           |                       |                |                  |             |                    |      |                         |         |               |          |                       |            |               |      |                    |    |                         |                 |                     |  |                       |        |         |            |           |           |         |  |     |  |  |  |  |  |  |  |  |  |                 |                  |                     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                               | 4 <sup>30</sup>    | 5 <sup>15</sup> | RUNNING CEMENT                        |            |             |           |                       |                |                  |             |                    |      |                         |         |               |          |                       |            |               |      |                    |    |                         |                 |                     |  |                       |        |         |            |           |           |         |  |     |  |  |  |  |  |  |  |  |  |                 |                  |                     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                               | 5 <sup>15</sup>    | 5 <sup>45</sup> | PUMP DOWN PLUG                        |            |             |           |                       |                |                  |             |                    |      |                         |         |               |          |                       |            |               |      |                    |    |                         |                 |                     |  |                       |        |         |            |           |           |         |  |     |  |  |  |  |  |  |  |  |  |                 |                  |                     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                               | 5 <sup>45</sup>    | 8 <sup>00</sup> | W.O.C.                                |            |             |           |                       |                |                  |             |                    |      |                         |         |               |          |                       |            |               |      |                    |    |                         |                 |                     |  |                       |        |         |            |           |           |         |  |     |  |  |  |  |  |  |  |  |  |                 |                  |                     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                               |                    |                 | CSG LANDED 826' AT 5 <sup>45</sup> AM |            |             |           |                       |                |                  |             |                    |      |                         |         |               |          |                       |            |               |      |                    |    |                         |                 |                     |  |                       |        |         |            |           |           |         |  |     |  |  |  |  |  |  |  |  |  |                 |                  |                     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                               |                    |                 | FEB 1/68                              |            |             |           |                       |                |                  |             |                    |      |                         |         |               |          |                       |            |               |      |                    |    |                         |                 |                     |  |                       |        |         |            |           |           |         |  |     |  |  |  |  |  |  |  |  |  |                 |                  |                     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| DRILLER                                                                                       | B. Armstrong       |                 | NO. HELPERS                           |            | 3           |           | DRILLER               | L. J. Phillips |                  | NO. HELPERS |                    | 4    |                         | DRILLER | G. J. Salas   |          | NO. HELPERS           |            | 3             |      |                    |    |                         |                 |                     |  |                       |        |         |            |           |           |         |  |     |  |  |  |  |  |  |  |  |  |                 |                  |                     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

Hudson's Bay Oil and Gas Company Limited

## DAILY DRILLERS REPORT

DATE JAN 31/68

| WELL NAME                                                                                     |  | LDG. FLG. TO KB         |            | CASING RECORD           |        | DEPTH                                  | SIZE | WEIGHT             | GRADE    | CEMENT                  | ACID       | PLUG DOWN                          | COMPANY SUPERVISOR |                    |     |                         |          |                       |            |                    |      |                         |    |                              |          |                    |  |                         |  |                              |  |     |  |
|-----------------------------------------------------------------------------------------------|--|-------------------------|------------|-------------------------|--------|----------------------------------------|------|--------------------|----------|-------------------------|------------|------------------------------------|--------------------|--------------------|-----|-------------------------|----------|-----------------------|------------|--------------------|------|-------------------------|----|------------------------------|----------|--------------------|--|-------------------------|--|------------------------------|--|-----|--|
| H B CAMERON HILLS A5-60-10-117-30W                                                            |  |                         |            |                         |        |                                        |      |                    |          |                         |            |                                    | Cliff Jansen       |                    |     |                         |          |                       |            |                    |      |                         |    |                              |          |                    |  |                         |  |                              |  |     |  |
| CONTRACTOR S+T DRILLING                                                                       |  | TYPE RIG NAT 50AA       |            | K. B. ELEV.             |        |                                        |      |                    |          |                         |            |                                    |                    |                    |     |                         |          |                       |            |                    |      |                         |    |                              |          |                    |  |                         |  |                              |  |     |  |
| RIG NO. 1E                                                                                    |  | TOOL PUSHER W.B. Haines |            | GRD. ELEV.              |        |                                        |      |                    |          |                         |            |                                    |                    |                    |     |                         |          |                       |            |                    |      |                         |    |                              |          |                    |  |                         |  |                              |  |     |  |
| 12 P.M. TO 8 A.M.                                                                             |  |                         |            |                         |        | 8 A.M. TO 4 P.M.                       |      |                    |          |                         |            | 4 P.M. TO 12 P.M.                  |                    |                    |     |                         |          |                       |            |                    |      |                         |    |                              |          |                    |  |                         |  |                              |  |     |  |
| DEPTH                                                                                         |  | START                   |            | PROGRESS                |        | END                                    |      | START              |          | PROGRESS                |            | END                                |                    | START              |     | PROGRESS                |          | END                   |            |                    |      |                         |    |                              |          |                    |  |                         |  |                              |  |     |  |
| BIT RECORD                                                                                    |  | NO.                     | SERIAL NO. | TYPE                    | SIZE   | FROM                                   | TO   | FOOTAGE            | HRS. RUN | NO.                     | SERIAL NO. | TYPE                               | SIZE               | FROM               | TO  | FOOTAGE                 | HRS. RUN | NO.                   | SERIAL NO. | TYPE               | SIZE | FROM                    | TO | FOOTAGE                      | HRS. RUN |                    |  |                         |  |                              |  |     |  |
|                                                                                               |  | 3A                      | 89588      | O5C3                    | 7 1/8  | 503                                    | 900  | 397                | 16       | 2A                      | 264055     | O5C3                               | 12 1/4             | 503                | 826 | 323                     | 18 1/2   |                       |            |                    |      |                         |    |                              |          |                    |  |                         |  |                              |  |     |  |
|                                                                                               |  | 2A                      | 264055     | O5C3                    | 12 1/4 | 503                                    | 629  | 126                | 14       |                         |            |                                    |                    |                    |     |                         |          |                       |            |                    |      |                         |    |                              |          |                    |  |                         |  |                              |  |     |  |
| DRILLING DATA                                                                                 |  | LINER SIZE              |            | PUMP PRESSURE           |        | TABLE SPEED                            |      | WEIGHT ON BIT      |          | LINER SIZE              |            | PUMP PRESSURE                      |                    | TABLE SPEED        |     | WEIGHT ON BIT           |          | LINER SIZE            |            | PUMP PRESSURE      |      | TABLE SPEED             |    | WEIGHT ON BIT                |          |                    |  |                         |  |                              |  |     |  |
|                                                                                               |  | 5 + 5 1/2               |            | 850 / 400               |        | 110 / 100                              |      | 20M / 10M          |          | 5 + 5 1/2               |            | 575                                |                    | 110-80             |     | 14-18M                  |          |                       |            |                    |      |                         |    |                              |          |                    |  |                         |  |                              |  |     |  |
| DRILLING STRING                                                                               |  | SIZE                    |            | STANDS                  |        | SINGLES                                |      | DRILL COL.         |          | KELLY IN                |            | CORE BBL.                          |                    | SIZE               |     | STANDS                  |          | SINGLES               |            | DRILL COL.         |      | KELLY IN                |    | CORE BBL.                    |          |                    |  |                         |  |                              |  |     |  |
|                                                                                               |  | 2                       |            | 2                       |        | 11                                     |      | 41.39              |          |                         |            |                                    |                    | 4"                 |     | 5                       |          | 11                    |            | 18'                |      |                         |    |                              |          |                    |  |                         |  |                              |  |     |  |
| MUD RECORD                                                                                    |  | TYPE OF MUD             |            | WEIGHT                  |        | VIS                                    |      | WL                 |          | PH                      |            | FC                                 |                    | TYPE OF MUD        |     | WEIGHT                  |          | VIS                   |            | WL                 |      | PH                      |    | FC                           |          |                    |  |                         |  |                              |  |     |  |
|                                                                                               |  |                         |            | 10.0                    |        | 185                                    |      |                    |          |                         |            |                                    |                    |                    |     | 10.1                    |          | 114                   |            |                    |      |                         |    |                              |          |                    |  |                         |  |                              |  |     |  |
|                                                                                               |  | ADDITIVES               |            | LIME 20%                |        |                                        |      |                    |          |                         |            |                                    |                    | ADDITIVES          |     |                         |          |                       |            |                    |      |                         |    |                              |          |                    |  |                         |  |                              |  |     |  |
| CORING                                                                                        |  | NO.                     |            | FROM                    |        | TO                                     |      | RECOVERED          |          | FORMATION               |            | NO.                                |                    | FROM               |     | TO                      |          | RECOVERED             |            | FORMATION          |      | NO.                     |    | FROM                         |          | TO                 |  | RECOVERED               |  | FORMATION                    |  |     |  |
|                                                                                               |  |                         |            |                         |        |                                        |      |                    |          |                         |            |                                    |                    |                    |     |                         |          |                       |            |                    |      |                         |    |                              |          |                    |  |                         |  |                              |  |     |  |
| SURVEY                                                                                        |  | DEG. AT                 |            | FT.                     |        | DEG. AT                                |      | FT.                |          | DEG. AT                 |            | FT.                                |                    | DEG. AT            |     | FT.                     |          | DEG. AT               |            | FT.                |      | DEG. AT                 |    | FT.                          |          | DEG. AT            |  | FT.                     |  | DEG. AT                      |  | FT. |  |
|                                                                                               |  |                         |            |                         |        |                                        |      |                    |          |                         |            |                                    |                    |                    |     |                         |          |                       |            |                    |      |                         |    |                              |          |                    |  |                         |  |                              |  |     |  |
| DRILL STEM TESTS                                                                              |  | NO.                     |            | INTERVAL                |        | FORMATION                              |      | NO.                |          | INTERVAL                |            | FORMATION                          |                    | NO.                |     | INTERVAL                |          | FORMATION             |            | NO.                |      | INTERVAL                |    | FORMATION                    |          | NO.                |  | INTERVAL                |  | FORMATION                    |  |     |  |
|                                                                                               |  |                         |            |                         |        |                                        |      |                    |          |                         |            |                                    |                    |                    |     |                         |          |                       |            |                    |      |                         |    |                              |          |                    |  |                         |  |                              |  |     |  |
|                                                                                               |  | VALVE OPEN (MINS.)      |            | INITIAL SHUT-IN (MINS.) |        | FINAL SHUT-IN (MINS.)                  |      | VALVE OPEN (MINS.) |          | INITIAL SHUT-IN (MINS.) |            | FINAL SHUT-IN (MINS.)              |                    | VALVE OPEN (MINS.) |     | INITIAL SHUT-IN (MINS.) |          | FINAL SHUT-IN (MINS.) |            | VALVE OPEN (MINS.) |      | INITIAL SHUT-IN (MINS.) |    | FINAL SHUT-IN (MINS.)        |          | VALVE OPEN (MINS.) |  | INITIAL SHUT-IN (MINS.) |  | FINAL SHUT-IN (MINS.)        |  |     |  |
|                                                                                               |  | GAS TO SURFACE          |            | MIN. @                  |        | MCF/D MAX.                             |      | GAS TO SURFACE     |          | MIN. @                  |            | MCF/D MAX.                         |                    | GAS TO SURFACE     |     | MIN. @                  |          | MCF/D MAX.            |            | GAS TO SURFACE     |      | MIN. @                  |    | MCF/D MAX.                   |          | GAS TO SURFACE     |  | MIN. @                  |  | MCF/D MAX.                   |  |     |  |
|                                                                                               |  | OIL TO SURFACE          |            | MIN. @                  |        | BBL/D MAX.                             |      | OIL TO SURFACE     |          | MIN. @                  |            | BBL/D MAX.                         |                    | OIL TO SURFACE     |     | MIN. @                  |          | BBL/D MAX.            |            | OIL TO SURFACE     |      | MIN. @                  |    | BBL/D MAX.                   |          | OIL TO SURFACE     |  | MIN. @                  |  | BBL/D MAX.                   |  |     |  |
|                                                                                               |  | RECOVERY:               |            |                         |        |                                        |      | RECOVERY:          |          |                         |            |                                    |                    | RECOVERY:          |     |                         |          |                       |            | RECOVERY:          |      |                         |    |                              |          | RECOVERY:          |  |                         |  |                              |  |     |  |
|                                                                                               |  | PRESSURES (PSI):        |            | HP                      |        | FP                                     |      | ISIP               |          | FSIP                    |            | PRESSURES (PSI):                   |                    | HP                 |     | FP                      |          | ISIP                  |            | FSIP               |      | PRESSURES (PSI):        |    | HP                           |          | FP                 |  | ISIP                    |  | FSIP                         |  |     |  |
| REMARKS INCLUDING:<br>CEMENTING<br>LOGGING<br>PERFORATING<br>ACIDIZING<br>FRACTURING<br>PLUGS |  | FROM                    |            | TO                      |        | DESCRIPTION OF WORK                    |      | FROM               |          | TO                      |            | DESCRIPTION OF WORK                |                    | FROM               |     | TO                      |          | DESCRIPTION OF WORK   |            | FROM               |      | TO                      |    | DESCRIPTION OF WORK          |          | FROM               |  | TO                      |  | DESCRIPTION OF WORK          |  |     |  |
|                                                                                               |  | 12 <sup>00</sup>        |            | 12 <sup>15</sup>        |        | RIG SERI                               |      | 8 <sup>00</sup>    |          | 8 <sup>15</sup>         |            | Rig Service                        |                    | 4 <sup>00</sup>    |     | 4 <sup>30</sup>         |          | FINISH TRIP OUT       |            | 4 <sup>00</sup>    |      | 4 <sup>30</sup>         |    | RIG SERVICE                  |          | 4 <sup>30</sup>    |  | 4 <sup>45</sup>         |  | RIG TO RUN CASING            |  |     |  |
|                                                                                               |  | 12 <sup>15</sup>        |            | 3 <sup>00</sup>         |        | DRIB 7 1/8 HOLE                        |      | 8 <sup>15</sup>    |          | 12 <sup>45</sup>        |            | Reaming 7 1/8 hole to 12 1/4       |                    | 4 <sup>30</sup>    |     | 4 <sup>45</sup>         |          | RIG TO RUN CASING     |            | 4 <sup>45</sup>    |      | 5 <sup>30</sup>         |    | Run 8 3/8 CASING             |          | 5 <sup>30</sup>    |  | 9 <sup>30</sup>         |  | THAW STAND PIPE & KELLY HOLE |  |     |  |
|                                                                                               |  | 3 <sup>00</sup>         |            | 4 <sup>00</sup>         |        | HOIST FOR 12 1/4 BIT-LAY DOWN 13 SGLS. |      | 12 <sup>45</sup>   |          | 2 <sup>15</sup>         |            | Summary trip 5 steps out - 29 diff |                    | 5 <sup>30</sup>    |     | 9 <sup>30</sup>         |          | Run 8 3/8 CASING      |            | 9 <sup>30</sup>    |      | 12 <sup>00</sup>        |    | THAW STAND PIPE & KELLY HOLE |          |                    |  |                         |  |                              |  |     |  |
|                                                                                               |  | 4 <sup>00</sup>         |            | 5 <sup>30</sup>         |        | RUN IN W/12 1/4 BIT REAM 60'           |      | 2 <sup>15</sup>    |          | 9 <sup>30</sup>         |            | Finish reaming to 8 26"            |                    |                    |     |                         |          |                       |            |                    |      |                         |    |                              |          |                    |  |                         |  |                              |  |     |  |
|                                                                                               |  | 5 <sup>30</sup>         |            | 8 <sup>00</sup>         |        | REAMING 7 1/8 HOLE TO 12 1/4           |      | 2 <sup>30</sup>    |          | 3 <sup>15</sup>         |            | Circ to cond hole to run Casg.     |                    |                    |     |                         |          |                       |            |                    |      |                         |    |                              |          |                    |  |                         |  |                              |  |     |  |
|                                                                                               |  |                         |            |                         |        |                                        |      | 3 <sup>15</sup>    |          | 3 <sup>30</sup>         |            | Summary                            |                    |                    |     |                         |          |                       |            |                    |      |                         |    |                              |          |                    |  |                         |  |                              |  |     |  |
|                                                                                               |  |                         |            |                         |        |                                        |      | 3 <sup>30</sup>    |          | 4 <sup>00</sup>         |            | Hoist to run Surf Casg.            |                    |                    |     |                         |          |                       |            |                    |      |                         |    |                              |          |                    |  |                         |  |                              |  |     |  |
| DRILLER                                                                                       |  | B. Armstrong            |            | NO. HELPERS             |        | 3                                      |      | DRILLER            |          | A. Williams             |            | NO. HELPERS                        |                    | 4                  |     | DRILLER                 |          | C. Salas              |            | NO. HELPERS        |      | 5                       |    |                              |          |                    |  |                         |  |                              |  |     |  |



DAILY DRILLERS REPORT

Hudson's Bay Oil and Gas Company Limited

DATE JAN 30/68

|                                                      |                                |                  |             |      |        |       |        |      |           |                                              |
|------------------------------------------------------|--------------------------------|------------------|-------------|------|--------|-------|--------|------|-----------|----------------------------------------------|
| WELL NAME <i>H.B. CAMERON HILLS 85-60-10-117-30W</i> | LDG. FLG. TO KB                | CASING<br>RECORD | DEPTH       | SIZE | WEIGHT | GRADE | CEMENT | ACID | PLUG DOWN | COMPANY<br>SUPERVISOR<br><i>Cliff Jarmen</i> |
| CONTRACTOR <i>S+T DRILLING</i>                       | TYPE RIG <i>50AE</i>           |                  | K. B. ELEV. |      |        |       |        |      |           |                                              |
| RIG NO. <i>1E</i>                                    | TOOL PUSHER <i>[Signature]</i> |                  | GRD. ELEV.  |      |        |       |        |      |           |                                              |

| DEPTH         | 12 P.M. TO 8 A.M.                                                                                                             |            |          |      |      |    |         |          | 8 A.M. TO 4 P.M. |            |      |      |       |    |          |          | 4 P.M. TO 12 P.M. |            |      |      |      |    |         |          |
|---------------|-------------------------------------------------------------------------------------------------------------------------------|------------|----------|------|------|----|---------|----------|------------------|------------|------|------|-------|----|----------|----------|-------------------|------------|------|------|------|----|---------|----------|
|               | START                                                                                                                         |            | PROGRESS |      | END  |    | START   |          | PROGRESS         |            | END  |      | START |    | PROGRESS |          | END               |            |      |      |      |    |         |          |
|               | NO.                                                                                                                           | SERIAL NO. | TYPE     | SIZE | FROM | TO | FOOTAGE | HRS. RUN | NO.              | SERIAL NO. | TYPE | SIZE | FROM  | TO | FOOTAGE  | HRS. RUN | NO.               | SERIAL NO. | TYPE | SIZE | FROM | TO | FOOTAGE | HRS. RUN |
| BIT<br>RECORD | <i>2A 264055 OSC3 12 1/4 254 503 249 11 1/2 3A 89588 OSC3 7 3/4 503 658 155' 5 3/4 3A 89588 OSC3 7 3/4 503 832 329 13 1/4</i> |            |          |      |      |    |         |          |                  |            |      |      |       |    |          |          |                   |            |      |      |      |    |         |          |

| DRILLING<br>DATA | LINER SIZE     |  |  |  | PUMP PRESSURE |  | TABLE SPEED |  | WEIGHT ON BIT |  | LINER SIZE     |  |  |  | PUMP PRESSURE |  | TABLE SPEED |  | WEIGHT ON BIT  |  | LINER SIZE |  |            |  | PUMP PRESSURE |  | TABLE SPEED  |  | WEIGHT ON BIT |  |
|------------------|----------------|--|--|--|---------------|--|-------------|--|---------------|--|----------------|--|--|--|---------------|--|-------------|--|----------------|--|------------|--|------------|--|---------------|--|--------------|--|---------------|--|
|                  | <i>5+5 1/2</i> |  |  |  | <i>450</i>    |  | <i>110</i>  |  | <i>7M</i>     |  | <i>5+5 1/2</i> |  |  |  | <i>110</i>    |  | <i>18M</i>  |  | <i>5+5 1/2</i> |  |            |  | <i>850</i> |  | <i>110</i>    |  | <i>18-20</i> |  |               |  |

| DRILLING<br>STRING | SIZE     |  | STANDS   |  | SINGLES   |  | DRILL COL.   |  | KELLY IN  |  | CORE BBL. |  | SIZE      |  | STANDS       |  | SINGLES   |  | DRILL COL. |  | KELLY IN  |  | CORE BBL.    |  |
|--------------------|----------|--|----------|--|-----------|--|--------------|--|-----------|--|-----------|--|-----------|--|--------------|--|-----------|--|------------|--|-----------|--|--------------|--|
|                    | <i>1</i> |  | <i>1</i> |  | <i>11</i> |  | <i>41.39</i> |  | <i>4"</i> |  | <i>3</i>  |  | <i>11</i> |  | <i>10.62</i> |  | <i>4"</i> |  | <i>5</i>   |  | <i>11</i> |  | <i>27.45</i> |  |

| MUD<br>RECORD | TYPE OF MUD               |  |  |  | WEIGHT     |  | VIS       |  | WL |  | PH |  | FC |  | TYPE OF MUD |  |            |  | WEIGHT    |  | VIS |  | WL |  | PH |  | FC |  |
|---------------|---------------------------|--|--|--|------------|--|-----------|--|----|--|----|--|----|--|-------------|--|------------|--|-----------|--|-----|--|----|--|----|--|----|--|
|               |                           |  |  |  | <i>69</i>  |  |           |  |    |  |    |  |    |  |             |  | <i>9.9</i> |  | <i>65</i> |  |     |  |    |  |    |  |    |  |
|               |                           |  |  |  | <i>9.8</i> |  | <i>80</i> |  |    |  |    |  |    |  |             |  | <i>9.9</i> |  | <i>67</i> |  |     |  |    |  |    |  |    |  |
|               | ADDITIVES <i>LIME 20#</i> |  |  |  |            |  |           |  |    |  |    |  |    |  |             |  |            |  |           |  |     |  |    |  |    |  |    |  |

| CORING | NO. |  |  |  | FROM |  |  |  | TO |  |  |  | RECOVERED |  |  |  | FORMATION |  |  |  | NO. |  |  |  | FROM |  |  |  | TO |  |  |  | RECOVERED |  |  |  | FORMATION |  |  |  |
|--------|-----|--|--|--|------|--|--|--|----|--|--|--|-----------|--|--|--|-----------|--|--|--|-----|--|--|--|------|--|--|--|----|--|--|--|-----------|--|--|--|-----------|--|--|--|
|        |     |  |  |  |      |  |  |  |    |  |  |  |           |  |  |  |           |  |  |  |     |  |  |  |      |  |  |  |    |  |  |  |           |  |  |  |           |  |  |  |

| SURVEY | 1/2 DEG. AT |  |  |  | 503 FT. |  |  |  | DEG. AT |  |  |  | FT. |  |  |  | DEG. AT |  |  |  | FT. |  |  |  | DEG. AT |  |  |  | FT. |  |  |  | DEG. AT |  |  |  | FT. |  |  |  |
|--------|-------------|--|--|--|---------|--|--|--|---------|--|--|--|-----|--|--|--|---------|--|--|--|-----|--|--|--|---------|--|--|--|-----|--|--|--|---------|--|--|--|-----|--|--|--|
|        |             |  |  |  |         |  |  |  |         |  |  |  |     |  |  |  |         |  |  |  |     |  |  |  |         |  |  |  |     |  |  |  |         |  |  |  |     |  |  |  |

| DRILL<br>STEM<br>TESTS | NO.                |  |  |  | INTERVAL                |  |  |  | FORMATION             |  |  |  | NO.                |  |  |  | INTERVAL                |  |  |  | FORMATION             |  |  |  | NO.                |  |  |  | INTERVAL                |  |  |  | FORMATION             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------|--------------------|--|--|--|-------------------------|--|--|--|-----------------------|--|--|--|--------------------|--|--|--|-------------------------|--|--|--|-----------------------|--|--|--|--------------------|--|--|--|-------------------------|--|--|--|-----------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
|                        | VALVE OPEN (MINS.) |  |  |  | INITIAL SHUT-IN (MINS.) |  |  |  | FINAL SHUT-IN (MINS.) |  |  |  | VALVE OPEN (MINS.) |  |  |  | INITIAL SHUT-IN (MINS.) |  |  |  | FINAL SHUT-IN (MINS.) |  |  |  | VALVE OPEN (MINS.) |  |  |  | INITIAL SHUT-IN (MINS.) |  |  |  | FINAL SHUT-IN (MINS.) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                        | GAS TO SURFACE     |  |  |  | MIN. @                  |  |  |  | MCF/D MAX.            |  |  |  | GAS TO SURFACE     |  |  |  | MIN. @                  |  |  |  | MCF/D MAX.            |  |  |  | GAS TO SURFACE     |  |  |  | MIN. @                  |  |  |  | MCF/D MAX.            |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                        | OIL TO SURFACE     |  |  |  | MIN. @                  |  |  |  | BBL/D MAX.            |  |  |  | OIL TO SURFACE     |  |  |  | MIN. @                  |  |  |  | BBL/D MAX.            |  |  |  | OIL TO SURFACE     |  |  |  | MIN. @                  |  |  |  | BBL/D MAX.            |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                        | RECOVERY:          |  |  |  |                         |  |  |  |                       |  |  |  |                    |  |  |  | RECOVERY:               |  |  |  |                       |  |  |  |                    |  |  |  |                         |  |  |  | RECOVERY:             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                        | PRESSURES (PSI):   |  |  |  |                         |  |  |  |                       |  |  |  |                    |  |  |  | PRESSURES (PSI):        |  |  |  |                       |  |  |  |                    |  |  |  |                         |  |  |  | PRESSURES (PSI):      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

| REMARKS<br>INCLUDING:<br>CEMENTING<br>LOGGING<br>PERFORATING<br>ACIDIZING<br>FRACTURING<br>PLUGS | FROM         |  | TO           |  | DESCRIPTION OF WORK                  |  | FROM        |  | TO          |  | DESCRIPTION OF WORK           |  | FROM        |  | TO           |  | DESCRIPTION OF WORK                       |  |
|--------------------------------------------------------------------------------------------------|--------------|--|--------------|--|--------------------------------------|--|-------------|--|-------------|--|-------------------------------|--|-------------|--|--------------|--|-------------------------------------------|--|
|                                                                                                  | <i>12 00</i> |  | <i>12 15</i> |  | <i>RIG SERVICE</i>                   |  | <i>8 00</i> |  | <i>9 00</i> |  | <i>Finish dalg mouse hole</i> |  | <i>4 00</i> |  | <i>4 15</i>  |  | <i>RIG SERVICE</i>                        |  |
|                                                                                                  | <i>12 15</i> |  | <i>5 15</i>  |  | <i>DALG 12 1/4 HOLE</i>              |  | <i>9 00</i> |  | <i>9 30</i> |  | <i>Run in w/ 7 3/4 bit</i>    |  | <i>4 15</i> |  | <i>4 45</i>  |  | <i>DALG 7 3/4 HOLE</i>                    |  |
|                                                                                                  | <i>5 15</i>  |  | <i>5 30</i>  |  | <i>SURVEY - STRAP OUT - .05 DIFF</i> |  | <i>9 30</i> |  | <i>9 45</i> |  | <i>Rig Service</i>            |  | <i>4 45</i> |  | <i>9 00</i>  |  | <i>SURVEY @ 740 - 1/2°</i>                |  |
|                                                                                                  | <i>5 30</i>  |  | <i>7 00</i>  |  | <i>HOIST FOR 7 3/4 BIT</i>           |  | <i>9 45</i> |  | <i>1 15</i> |  | <i>Dalg 7 3/4 hole</i>        |  | <i>9 00</i> |  | <i>12 00</i> |  | <i>DALG 7 3/4 HOLE - GRAVEL STRINGERS</i> |  |
|                                                                                                  | <i>7 00</i>  |  | <i>8 00</i>  |  | <i>DRILL MOUSEHOLE</i>               |  | <i>1 15</i> |  | <i>1 45</i> |  | <i>Repair Shale Striker</i>   |  |             |  |              |  | <i>(GRAVEL TO 750')</i>                   |  |

|                             |                      |                            |                      |                            |                      |
|-----------------------------|----------------------|----------------------------|----------------------|----------------------------|----------------------|
| DRILLER <i>B. Armstrong</i> | NO. HELPERS <i>3</i> | DRILLER <i>[Signature]</i> | NO. HELPERS <i>5</i> | DRILLER <i>[Signature]</i> | NO. HELPERS <i>3</i> |
|-----------------------------|----------------------|----------------------------|----------------------|----------------------------|----------------------|

DATE JAN 29 / 68

Hudson's Bay Oil and Gas Company Limited

|                                                                  |  |  |  |  |  |  |  |  |  |                                                                  |  |  |  |  |             |  |        |      |        |                                                                  |        |      |           |                    |  |  |  |  |  |                                                             |  |  |  |  |  |  |  |  |  |                               |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
|------------------------------------------------------------------|--|--|--|--|--|--|--|--|--|------------------------------------------------------------------|--|--|--|--|-------------|--|--------|------|--------|------------------------------------------------------------------|--------|------|-----------|--------------------|--|--|--|--|--|-------------------------------------------------------------|--|--|--|--|--|--|--|--|--|-------------------------------|--|--|--|--|--|--|--|--|--|----------------------|--|--|--|--|--|--|--|--|--|
| WELL NAME <b>H.B. CAMERON HILLS A5-60-10-117-30W</b>             |  |  |  |  |  |  |  |  |  | LDG. FLG. TO KB                                                  |  |  |  |  | CASING      |  | DEPTH  | SIZE | WEIGHT | GRADE                                                            | CEMENT | ACID | PLUG DOWN | COMPANY SUPERVISOR |  |  |  |  |  |                                                             |  |  |  |  |  |  |  |  |  |                               |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
| CONTRACTOR <b>S+T DRILLING</b>                                   |  |  |  |  |  |  |  |  |  | TYPE RIG <b>50AE</b>                                             |  |  |  |  | K. B. ELEV. |  | RECORD |      |        |                                                                  |        |      |           |                    |  |  |  |  |  |                                                             |  |  |  |  |  |  |  |  |  |                               |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
| RIG NO. <b>1E</b>                                                |  |  |  |  |  |  |  |  |  | TOOL PUSHER                                                      |  |  |  |  | GRD. ELEV.  |  |        |      |        |                                                                  |        |      |           |                    |  |  |  |  |  |                                                             |  |  |  |  |  |  |  |  |  |                               |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
| 12 P.M. TO 8 A.M.                                                |  |  |  |  |  |  |  |  |  | 8 A.M. TO 4 P.M.                                                 |  |  |  |  |             |  |        |      |        | 4 P.M. TO 12 P.M.                                                |        |      |           |                    |  |  |  |  |  |                                                             |  |  |  |  |  |  |  |  |  |                               |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
| DEPTH                                                            |  |  |  |  |  |  |  |  |  | START <b>60</b> PROGRESS <b>55</b> END <b>115</b>                |  |  |  |  |             |  |        |      |        | START <b>115</b> PROGRESS <b>139'</b> END <b>254</b>             |        |      |           |                    |  |  |  |  |  | START <b>254</b> PROGRESS <b>186</b> END <b>440</b>         |  |  |  |  |  |  |  |  |  |                               |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
| BIT RECORD                                                       |  |  |  |  |  |  |  |  |  | NO. SERIAL NO. TYPE SIZE FROM TO FOOTAGE HRS. RUN                |  |  |  |  |             |  |        |      |        | NO. SERIAL NO. TYPE SIZE FROM TO FOOTAGE HRS. RUN                |        |      |           |                    |  |  |  |  |  | NO. SERIAL NO. TYPE SIZE FROM TO FOOTAGE HRS. RUN           |  |  |  |  |  |  |  |  |  |                               |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
| 1A MN 836 05/31 12 1/4 0 115 115 8 1/4                           |  |  |  |  |  |  |  |  |  | 1A MN 836 05/31 12 1/4 0 254 254 15 1/2                          |  |  |  |  |             |  |        |      |        | 2A 264055 05/31 12 1/4 254 440 186 6 1/2                         |        |      |           |                    |  |  |  |  |  |                                                             |  |  |  |  |  |  |  |  |  |                               |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
| DRILLING DATA                                                    |  |  |  |  |  |  |  |  |  | LINER SIZE PUMP PRESSURE TABLE SPEED WEIGHT ON BIT               |  |  |  |  |             |  |        |      |        | LINER SIZE PUMP PRESSURE TABLE SPEED WEIGHT ON BIT               |        |      |           |                    |  |  |  |  |  | LINER SIZE PUMP PRESSURE TABLE SPEED WEIGHT ON BIT          |  |  |  |  |  |  |  |  |  |                               |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
| 5' + 5 1/2 300 100 4M                                            |  |  |  |  |  |  |  |  |  | 5' + 5 1/2 350 110 6M                                            |  |  |  |  |             |  |        |      |        | 5' + 5 1/2 450 120 7-10                                          |        |      |           |                    |  |  |  |  |  |                                                             |  |  |  |  |  |  |  |  |  |                               |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
| DRILLING STRING                                                  |  |  |  |  |  |  |  |  |  | SIZE STANDS SINGLES DRILL COL. KELLY IN CORE BBL.                |  |  |  |  |             |  |        |      |        | SIZE STANDS SINGLES DRILL COL. KELLY IN CORE BBL.                |        |      |           |                    |  |  |  |  |  | SIZE STANDS SINGLES DRILL COL. KELLY IN CORE BBL.           |  |  |  |  |  |  |  |  |  |                               |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
| 3 21.27                                                          |  |  |  |  |  |  |  |  |  | 7 38'                                                            |  |  |  |  |             |  |        |      |        | 2 11 41'                                                         |        |      |           |                    |  |  |  |  |  |                                                             |  |  |  |  |  |  |  |  |  |                               |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
| MUD RECORD                                                       |  |  |  |  |  |  |  |  |  | TYPE OF MUD WEIGHT VIS WL PH FC                                  |  |  |  |  |             |  |        |      |        | TYPE OF MUD WEIGHT VIS WL PH FC                                  |        |      |           |                    |  |  |  |  |  | TYPE OF MUD WEIGHT VIS WL PH FC                             |  |  |  |  |  |  |  |  |  |                               |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
| 8.5 40                                                           |  |  |  |  |  |  |  |  |  | 8" 42                                                            |  |  |  |  |             |  |        |      |        |                                                                  |        |      |           |                    |  |  |  |  |  |                                                             |  |  |  |  |  |  |  |  |  |                               |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
| ADDITIVES <b>GEL- 3500</b>                                       |  |  |  |  |  |  |  |  |  | ADDITIVES <b>Lime 100"</b>                                       |  |  |  |  |             |  |        |      |        | ADDITIVES                                                        |        |      |           |                    |  |  |  |  |  |                                                             |  |  |  |  |  |  |  |  |  |                               |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
| <b>CAUSTIC - 100</b>                                             |  |  |  |  |  |  |  |  |  | <b>Def 1800"</b>                                                 |  |  |  |  |             |  |        |      |        |                                                                  |        |      |           |                    |  |  |  |  |  |                                                             |  |  |  |  |  |  |  |  |  |                               |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
| <b>LIME - 25</b>                                                 |  |  |  |  |  |  |  |  |  |                                                                  |  |  |  |  |             |  |        |      |        |                                                                  |        |      |           |                    |  |  |  |  |  |                                                             |  |  |  |  |  |  |  |  |  |                               |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
| CORING                                                           |  |  |  |  |  |  |  |  |  | NO. FROM TO RECOVERED FORMATION                                  |  |  |  |  |             |  |        |      |        | NO. FROM TO RECOVERED FORMATION                                  |        |      |           |                    |  |  |  |  |  | NO. FROM TO RECOVERED FORMATION                             |  |  |  |  |  |  |  |  |  |                               |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
| SURVEY                                                           |  |  |  |  |  |  |  |  |  | 1/2 DEG. AT 100 FT. DEG. AT FT. DEG. AT FT.                      |  |  |  |  |             |  |        |      |        | 1/2 DEG. AT 151 FT. DEG. AT FT. DEG. AT FT.                      |        |      |           |                    |  |  |  |  |  | 1/2 DEG. AT 245 FT. 1/8 DEG. AT 335 FT. 3/4 DEG. AT 430 FT. |  |  |  |  |  |  |  |  |  |                               |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
| DRILL STEM TESTS                                                 |  |  |  |  |  |  |  |  |  | NO. INTERVAL FORMATION                                           |  |  |  |  |             |  |        |      |        | NO. INTERVAL FORMATION                                           |        |      |           |                    |  |  |  |  |  | NO. INTERVAL FORMATION                                      |  |  |  |  |  |  |  |  |  |                               |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
| VALVE OPEN (MINS.) INITIAL SHUT-IN (MINS.) FINAL SHUT-IN (MINS.) |  |  |  |  |  |  |  |  |  | VALVE OPEN (MINS.) INITIAL SHUT-IN (MINS.) FINAL SHUT-IN (MINS.) |  |  |  |  |             |  |        |      |        | VALVE OPEN (MINS.) INITIAL SHUT-IN (MINS.) FINAL SHUT-IN (MINS.) |        |      |           |                    |  |  |  |  |  |                                                             |  |  |  |  |  |  |  |  |  |                               |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
| GAS TO SURFACE MIN. @ MCF/D MAX.                                 |  |  |  |  |  |  |  |  |  | GAS TO SURFACE MIN. @ MCF/D MAX.                                 |  |  |  |  |             |  |        |      |        | GAS TO SURFACE MIN. @ MCF/D MAX.                                 |        |      |           |                    |  |  |  |  |  |                                                             |  |  |  |  |  |  |  |  |  |                               |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
| OIL TO SURFACE MIN. @ BBL/D MAX.                                 |  |  |  |  |  |  |  |  |  | OIL TO SURFACE MIN. @ BBL/D MAX.                                 |  |  |  |  |             |  |        |      |        | OIL TO SURFACE MIN. @ BBL/D MAX.                                 |        |      |           |                    |  |  |  |  |  |                                                             |  |  |  |  |  |  |  |  |  |                               |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
| RECOVERY:                                                        |  |  |  |  |  |  |  |  |  | RECOVERY:                                                        |  |  |  |  |             |  |        |      |        | RECOVERY:                                                        |        |      |           |                    |  |  |  |  |  |                                                             |  |  |  |  |  |  |  |  |  |                               |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
| PRESSURES (PSI): HP FF ISIP FSIP                                 |  |  |  |  |  |  |  |  |  | PRESSURES (PSI): HP FF ISIP FSIP                                 |  |  |  |  |             |  |        |      |        | PRESSURES (PSI): HP FF ISIP FSIP                                 |        |      |           |                    |  |  |  |  |  |                                                             |  |  |  |  |  |  |  |  |  |                               |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
| REMARKS INCLUDING:                                               |  |  |  |  |  |  |  |  |  | FROM TO DESCRIPTION OF WORK                                      |  |  |  |  |             |  |        |      |        | FROM TO DESCRIPTION OF WORK                                      |        |      |           |                    |  |  |  |  |  | FROM TO DESCRIPTION OF WORK                                 |  |  |  |  |  |  |  |  |  |                               |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
| 12" 12'5" RIG SERV.                                              |  |  |  |  |  |  |  |  |  | 8" 8'5" RIG SERVICE                                              |  |  |  |  |             |  |        |      |        | 4" 4'15" RIG SERVICE                                             |        |      |           |                    |  |  |  |  |  |                                                             |  |  |  |  |  |  |  |  |  |                               |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
| 12'5" 7'5" DRILG 12 1/4 HOLE                                     |  |  |  |  |  |  |  |  |  | 8'5" 11'15" DRILG 12 1/4 HOLE                                    |  |  |  |  |             |  |        |      |        | 4'15" 4'30" MAKE UP BIT #2A                                      |        |      |           |                    |  |  |  |  |  |                                                             |  |  |  |  |  |  |  |  |  |                               |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
| 7'5" 7'30" WL SURVEY                                             |  |  |  |  |  |  |  |  |  | 11'15" 12" SURVEY @ 151 1/2                                      |  |  |  |  |             |  |        |      |        | 4'30" 4'45" RUN IN HOLE                                          |        |      |           |                    |  |  |  |  |  |                                                             |  |  |  |  |  |  |  |  |  |                               |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
| 7'30" 8" DRILG 12 1/4 HOLE                                       |  |  |  |  |  |  |  |  |  | 12" 3'45" DRILG 12 1/4 HOLE                                      |  |  |  |  |             |  |        |      |        | 4'45" 5" SURVEY @ 245 1/2                                        |        |      |           |                    |  |  |  |  |  |                                                             |  |  |  |  |  |  |  |  |  |                               |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
|                                                                  |  |  |  |  |  |  |  |  |  | 3'45" 4" HAST FOR HIT                                            |  |  |  |  |             |  |        |      |        | 5" 5'15" DRILG 12 1/4 HOLE                                       |        |      |           |                    |  |  |  |  |  |                                                             |  |  |  |  |  |  |  |  |  |                               |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
|                                                                  |  |  |  |  |  |  |  |  |  |                                                                  |  |  |  |  |             |  |        |      |        | 5'15" 8'30" SURVEY @ 335 - 1/8                                   |        |      |           |                    |  |  |  |  |  |                                                             |  |  |  |  |  |  |  |  |  |                               |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
|                                                                  |  |  |  |  |  |  |  |  |  |                                                                  |  |  |  |  |             |  |        |      |        | 8'30" 11'45" DRILG 12 1/4 HOLE                                   |        |      |           |                    |  |  |  |  |  |                                                             |  |  |  |  |  |  |  |  |  |                               |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
|                                                                  |  |  |  |  |  |  |  |  |  |                                                                  |  |  |  |  |             |  |        |      |        | 11'45" 12" W.L. SURVEY @ 430 - 3/4                               |        |      |           |                    |  |  |  |  |  |                                                             |  |  |  |  |  |  |  |  |  |                               |  |  |  |  |  |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
| DRILLER <b>B. Armstrong</b>                                      |  |  |  |  |  |  |  |  |  | NO. HELPERS <b>3</b>                                             |  |  |  |  |             |  |        |      |        | DRILLER <b>P. L. Phillips</b>                                    |        |      |           |                    |  |  |  |  |  | NO. HELPERS <b>5</b>                                        |  |  |  |  |  |  |  |  |  | DRILLER <b>W. J. S. S. S.</b> |  |  |  |  |  |  |  |  |  | NO. HELPERS <b>3</b> |  |  |  |  |  |  |  |  |  |

