

PACIFIC H. B. ALEXANDRA

0-54

667-11-04-044

M-NWT 654  
Pacific HB Alexandra 0-54



|                                                                    |                                        |                                                                                            |                                |
|--------------------------------------------------------------------|----------------------------------------|--------------------------------------------------------------------------------------------|--------------------------------|
| Well Name<br>Nom du puits <b>Pacific HB Alexandra 0-54</b>         |                                        | Drilling Authority No.<br>Autorisation de forage n° <b>654</b>                             |                                |
| Field/Area<br>Gisement/Région <b>Tathlina Lake - Cameron Hills</b> |                                        | Date Issued<br>Date d'émission <b>10-01-73</b>                                             |                                |
| Location<br>En placement                                           | Unit<br>Unité <b>0-54-60-30-117-45</b> | Section                                                                                    | Permit or Lease<br><b>4138</b> |
| Latitude <b>60°23'48"</b>                                          |                                        | Longitude <b>117°55'10"</b>                                                                |                                |
| U.W.L.R.<br>N.R.U.E.P. <b>60.39666 -- 117.91945</b>                |                                        |                                                                                            |                                |
| U.W.I. No.<br>N.I.P. No. <b>3000546030117450</b>                   |                                        |                                                                                            |                                |
| File Microfilmed                                                   |                                        | Rig. Release Date<br>Date de transfert de la tour de forage <b>10-03-73</b>                |                                |
| Tour Sheets, Microfilmed                                           |                                        | Status<br>Statut <b>D + A</b>                                                              |                                |
|                                                                    |                                        | Information Release Date<br>Date de publication autorisée des informations <b>10-03-75</b> |                                |

CHANGE OF NAME:  
CHANGEMENT DE NOM:Change of Location  
Changement de emplacement

| INDEX                                                  | DATE RECEIVED<br>RECU LE | INDEX                                                                                             |
|--------------------------------------------------------|--------------------------|---------------------------------------------------------------------------------------------------|
| Application for a Drilling Authority                   | 15-01-73 K               | Demande d'autorisation de forage                                                                  |
| Well Completion Data                                   | 2-10-73 K                | Renseignements sur le forage d'un puits                                                           |
| Well History Report                                    | 2-10-73 K                | Données chronologiques sur le puits                                                               |
| Application to Amend a Drilling Authority              | 30-4-73 K                | Demande de modification d'une autorisation de forage                                              |
| Application to Change a Well Name                      |                          | Demande de changement du nom d'un puits                                                           |
| Application to Abandon a Well or Suspend Drilling      | 30-4-73 K                | Demande d'abandon d'un puits ou de suspension du forage                                           |
| Application to Alter Condition of a Well               |                          | Demande d'autorisation de modifier l'état d'un puits                                              |
| Well History Supplement                                |                          | Supplément aux données chronologiques sur le puits                                                |
| Well Completion Data                                   |                          | Renseignements sur le forage d'un puits                                                           |
| Work-Over Report No. ....                              |                          | Rapport de reconditionnement n° .....                                                             |
| Application to Commingle Production before Measurement |                          | Demande d'autorisation de mélanger la production avant jaugeage                                   |
| Data for Back Pressure Test on Natural Gas Wells       |                          | Données de calcul de la capacité de production d'un puits de gaz naturel - Méthode graphique n° 7 |
| Data for Back Pressure Test on Natural Gas Wells       |                          | Données de calcul de la capacité de production d'un puits de gaz naturel - Méthode de Vitter      |
| M.P.R. - Oil - Calculations                            |                          | Calcul du T.M.P. (Taux maximal de production) de pétrole                                          |
| New Oil Well Report                                    |                          | Rapport sur un nouveau puits de pétrole                                                           |
| New Gas Well Report                                    |                          | Rapport sur un nouveau puits de gaz naturel                                                       |
| Well Inspection Report                                 |                          | Rapport d'inspection de l'emplacement d'un puits                                                  |
| Rig Inspection Report                                  | 8-3-73 K                 | Rapport d'inspection d'une tour de forage                                                         |
| Battery Inspection Report                              |                          | Rapport d'inspection d'une batterie de puits                                                      |
| Equipment Report                                       |                          | Rapport d'inspection des compteurs                                                                |
| Well Card                                              | 2-10-73 K                | Fiche de puits                                                                                    |
| New Service Well Report                                |                          | Rapport sur un nouveau puits de service                                                           |
| Strat Service Logs                                     |                          | Rapport mensuel des injections d'eau                                                              |
| Logs - Large scale                                     |                          | Diagrammes: Grande échelle                                                                        |
| Logs - Small scale                                     |                          | Diagrammes: Petite échelle                                                                        |

DATE RECEIVED  
RECU LE

LOGS: DIAGRAMMES

NAME  
Nom

Type

Run No.  
Nº du  
sondage

Interval  
Intervalle

ANALYSES:

Sample  
Échantillon

Lab. No.  
Lab. nº

Formation

Interval  
Intervalle

A.O.F. Potential  
Débit maximal  
absolu d'un puits

Formation

Interval  
Intervalle

MC.F/D.  
M.P.C./jour

Test Date  
Date du test

DRILL STEM TESTS: — ESSAIS AUX TIGES

No.  
Nº

Formation

Interval  
Intervalle

To be submitted in duplicate within thirty days after the completion, rework, abandonment, recompletion or suspension of every well.  
À présenter en double dans les trente jours suivant l'achèvement, le remaniement, l'abandon et le reconditionnement de chaque puits, ou après suspension.

|                                                                                                                       |                                                                   |                                           |
|-----------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|-------------------------------------------|
| Well Name & No - Nom et n° du puits<br><b>PACIFIC HB ALEXANDRA 0-54</b>                                               | Permit No. - N° de permis<br><b>4138</b>                          | Lease No. - N° de concession<br><b>--</b> |
| (Permittee, License, Lessee) - (Détenant de permis, du concessionnaire)<br><b>Hudson's Bay Oil &amp; Gas Co. Ltd.</b> | Exploratory Licence No. - N° de licence de sondage<br><b>1503</b> |                                           |
| (Operator) - (Exécutant)<br><b>Pacific Petroleum Ltd.</b>                                                             | Exploratory Licence No. - N° de licence de sondage<br><b>1448</b> |                                           |

|                                                                       |                      |                                                                                                                              |  |                                  |
|-----------------------------------------------------------------------|----------------------|------------------------------------------------------------------------------------------------------------------------------|--|----------------------------------|
| LOCATION - EMPLACEMENT                                                |                      | Latitude<br><b>60° 23' 48"</b>                                                                                               |  | Longitude<br><b>117° 55' 10"</b> |
| Unit - Unité<br><b>0</b>                                              | Section<br><b>54</b> | Grid - Étendue quadrillée<br><b>60-30-117-45</b>                                                                             |  |                                  |
| Unique Well Identifier - Code d'ordinateur<br><b>3000546030117450</b> |                      | Universal Well Location Reference - Références universelles d'emplacement du puits<br><b>Lat.60.39666°N Long.117.91945°W</b> |  |                                  |

|                                                | Date      | Depth - Profondeur | Pool(s)<br>Gisement(s) |
|------------------------------------------------|-----------|--------------------|------------------------|
| Sounded<br>Début des travaux                   | Feb.22/73 | 241'               |                        |
| Suspended<br>Suspension des travaux            |           |                    |                        |
| Resumed Operations<br>Reprise des travaux      |           |                    |                        |
| Finished Drilling<br>Forage terminé            | Mar6/73   | 3890'              |                        |
| Deepened<br>Approfondissement                  |           |                    |                        |
| Complete (Gas/Oil)<br>Achèvement (Gaz/Pétrole) |           |                    |                        |
| Abandoned<br>Abandon                           | Mar10/73  | 3890'              |                        |
| Rig Released<br>Fin des travaux                | Mar10/73  |                    |                        |

Elevation: Gr. **970'** K.B. **982.50'**  
Altitude du sol du carré d'entraînement

Rig No. **9** Drilling Contractor **Kenting-Petrolia**  
N° de la tour de orage Entrepreneur en forage

Contractor's Business Licence No. **0230**  
N° du permis de l'entrepreneur

| CASING RECORD - TUBAGE                       |                  |                 |                   |                        |                                                               |
|----------------------------------------------|------------------|-----------------|-------------------|------------------------|---------------------------------------------------------------|
| Casing Size (Inches)<br>Diamètre (en pouces) | Grade<br>Qualité | Weight<br>Poids | Amount<br>Longeur | Set at -<br>Fixation à | Sacks of Cement and Additives<br>Sacs de ciment et d'additifs |
| 1. <b>8 5/8"</b>                             | <b>ST&amp;C</b>  | <b>24#</b>      | <b>470.50</b>     | <b>483'</b>            | <b>355 const. cement</b>                                      |
| 2.                                           |                  |                 |                   |                        |                                                               |
| 3.                                           |                  |                 |                   |                        |                                                               |
| 4.                                           |                  |                 |                   |                        |                                                               |
| 5.                                           |                  |                 |                   |                        |                                                               |
| 6.                                           |                  |                 |                   |                        |                                                               |

| Sample depths<br>Sommet des formations | Elevation - Profondeur          |                                     | Core Record - Carottes |        |                |           |        |
|----------------------------------------|---------------------------------|-------------------------------------|------------------------|--------|----------------|-----------|--------|
|                                        | Depths<br>Sous le niveau du sol | Sub-Sea<br>Sous le niveau de la mer | From - de              | To - à | Rec.<br>Récup. | From - de | To - à |
| Fort St. John                          | 41'                             | + 929'                              | NO CORES CUT           |        |                |           |        |
| Devonian                               | 162'                            | + 808'                              |                        |        |                |           |        |
| Trout River                            | 1065'                           | - 95'                               |                        |        |                |           |        |
| Grumbler                               | 1175'                           | - 205'                              |                        |        |                |           |        |
| Alexandra                              | 1627'                           | - 657'                              |                        |        |                |           |        |
| Hay River Shale                        | 1815'                           | - 845'                              |                        |        |                |           |        |

| Sample depths<br>Sommet des formations | Elevation - Profondeur          |                                     | Log Record - Diagrammes |                                   |           |        |
|----------------------------------------|---------------------------------|-------------------------------------|-------------------------|-----------------------------------|-----------|--------|
|                                        | Depths<br>Sous le niveau du sol | Sub-Sea<br>Sous le niveau de la mer | Run<br>Série            | Type of Log<br>Genre de diagramme | From - De | To - À |
| Muskwa                                 | 3070'                           | - 2100'                             |                         |                                   |           |        |
| Slave Point                            | 3171'                           | - 2201'                             |                         |                                   |           |        |
| Watt Mountain                          | 3355'                           | - 2385'                             | 1                       | Dual Induction Laterolog          | 3890'     | 485'   |
| Sulphur Point                          | 3373'                           | - 2403'                             | 1                       | Borehole Compensated Sonic        | 3890'     | 485'   |
| Elk Point Dolomite                     | 3416'                           | - 2446'                             | 1                       | Formation Density                 | 3890'     | 2400'  |
| Anhydrite (Muskeg)                     | 3460'                           | - 2490'                             |                         |                                   |           |        |
| Keg River                              | 3515'                           | - 2545'                             |                         |                                   |           |        |
| Lower Keg River                        | 3758'                           | - 2788'                             |                         |                                   |           |        |
| Chinchaga                              | 3814'                           | - 2844'                             |                         |                                   |           |        |
| Pre-Cambrian                           | 3865'                           | - 2895'                             |                         |                                   |           |        |



| CEMENTING RECORD (Plug, Squeeze, etc.)<br>CIMENTATION (Bouchon, sous pression, etc.) |           |        |                                                                                             | PERFORATING RECORD (Bullet, Jet)<br>PERFORATION (à balles, à jet) |           |        |                     | SERVICING RECORD (Acidizing, Fracing, etc.)<br>ENTRETIEN (acidification, fracturation, etc.) |           |        |                     |
|--------------------------------------------------------------------------------------|-----------|--------|---------------------------------------------------------------------------------------------|-------------------------------------------------------------------|-----------|--------|---------------------|----------------------------------------------------------------------------------------------|-----------|--------|---------------------|
| Date                                                                                 | From - de | To - à | Remarks - Remarques                                                                         | Date                                                              | From - de | To - à | Remarks - Remarques | Date                                                                                         | From - de | To - à | Remarks - Remarques |
| Mar 9/73                                                                             | 3690      | 3890   | Plug #1 90 sax conscem.                                                                     |                                                                   |           |        |                     |                                                                                              |           |        |                     |
| Mar 9/73                                                                             | 3117      | 3432   | Plug #2 160 sax conscem +2% CaCl <sub>2</sub>                                               |                                                                   |           |        |                     |                                                                                              |           |        |                     |
| Mar 9/73                                                                             | 433'      | 533    | Plug #3 70 sax conscem. +2% CaCl <sub>2</sub>                                               |                                                                   |           |        |                     |                                                                                              |           |        |                     |
| Mar 9/73                                                                             | Surface   |        | Plug #4 5 sax conscem. Cut casing 3' below G.L. Welded on Plate w/riser and well identifier |                                                                   |           |        |                     |                                                                                              |           |        |                     |

### DRILL STEM TESTS - ESSAIS AUX TIGES

| No. - N° | Date     | Formation   | From - de | To - à | V.O. Mins. Vitesse ouverte (minutes) | I.S.I. Mins. Première obturation (minutes) | F.S.I. Mins. Obturation définitive (minutes) | I.S.I.B.H.P. Pression de fond à la fin de la première obturation | F.S.I.B.H.P. Pression de fond à l'obturation définitive | I.F.B.H.P. Pression de fond au faillissement | F.F.B.H.P. Pression de fond à l'écoulement définitif | L.H.P. Pression hydrostatique début | F.H.P. Pression hydrostatique définitif | Remarks - Remarques                                                                                                                                             |
|----------|----------|-------------|-----------|--------|--------------------------------------|--------------------------------------------|----------------------------------------------|------------------------------------------------------------------|---------------------------------------------------------|----------------------------------------------|------------------------------------------------------|-------------------------------------|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1        | Mar 8/73 | Keg River   | 3500      | 3635   | 60                                   | 90                                         | 90                                           | 1557                                                             | 1557                                                    | 302                                          | 1328                                                 | 1783                                | 1772                                    | FAB on PF. FAB on VO steady throughout test. NGTS. Rec'd 500' sulphurous muddy water and 2490' sulphurous salt water (46,400 ppm NaCl) BHT 105°                 |
| 2        | Mar 9/73 | Slave Point | 3170      | 3240   | 60                                   | 60                                         | 60                                           | 1390                                                             | 1390                                                    | 70                                           | 287                                                  | 1631                                | 1631                                    | WAB on PF. WAB on VO decr'g slightly at the end of flow period. NGTS. Rec. 60' black muddy sulphurous salt water and 580' salt water (80,400 ppm NaCl) BHT 101° |

### ANALYSIS - ANALYSE

| ANALYSIS - ANALYSE         |                    |           |        | PRESENT STATUS OF WELL<br>ETAT ACTUEL DU Puits |                     |             |         |
|----------------------------|--------------------|-----------|--------|------------------------------------------------|---------------------|-------------|---------|
| Lab. No. No de laboratoire | Sample Echantillon | From - de | To - à | Source                                         | Remarks - Remarques | Oil Pétrole | Gas Gaz |
| F73-252-3                  | Water              | 3500      | 3635   | DST #1                                         |                     |             |         |
| F73-253-4                  | Water              | 3170      | 3240   | DST #2                                         |                     |             |         |

Company Société ..... PACIFIC PETROLEUMS LTD.  
Signed by Signé par ..... *[Signature]*  
Title Titre ..... Frontier Operations Manager

Date ..... September 14/73

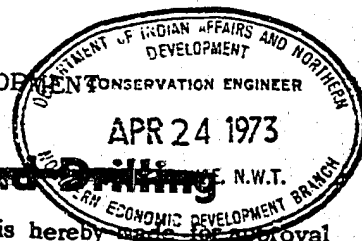
Forms to be prepared in duplicate and forwarded to the District Conservation Engineer.

Présenter les formules remplies à l'ingénieur en conservation du district.



Drilling Authority No. 654

DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT  
OIL AND MINERAL DIVISION



Application to Abandon a Well or Suspend Drilling

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

Name and number of well PACIFIC HB ALEXANDRA 0-54  
Location: Unit 0, Section 54, Grid 60-30-117-45  
Latitude 60° 23' 48" N Longitude 117° 55' 10" W  
Exon Established Reference Marker Unique Well Identifier 3000546030117450  
Universal Well Location Reference Lat. 60.39666° N Long. 117.91945° W  
Permit No. 4138 Lease No.

(Permittee, Licencee, Lessee)

Date of commencement of proposed program March 9, 1973

OIL, GAS, AND WATER ENCOUNTERED  
(Depths)

Oil at Nil  
Gas at Nil  
\* Water at 3170-3240, 3500-3635  
Total Depth 3890 Date of last operations March 10, 1973  
Present condition of well Abandoned

CASING RECORD

| Casing Size O.D. Inches | Weight | Amount | Set At— | Sacks of Cement and Additives | Amount Pulled |
|-------------------------|--------|--------|---------|-------------------------------|---------------|
| 1. 8 5/8"               | 24#    | 470.50 | 483     | 275                           | Nil           |
| 2.                      |        |        |         |                               |               |
| 3.                      |        |        |         |                               |               |
| 4.                      |        |        |         |                               |               |
| 5.                      |        |        |         |                               |               |

PROPOSED ABANDONMENT PROGRAM

| Plug |           | Geological Formation       | Number of Sacks of Cement | Remarks                                                              |
|------|-----------|----------------------------|---------------------------|----------------------------------------------------------------------|
| No.  | Position  |                            |                           |                                                                      |
| 1    | 3690-3890 | Keg River Dolo/Precambrian | 90                        | Not Felt                                                             |
| 2    | 3117-3432 | Slave Point                | 160                       | Felt @ 3070 KB                                                       |
| 3    | 433- 533  | Devonian                   | 70                        | Felt @ 410 KB                                                        |
| 4    | Surface   |                            | 5                         | Cut Csg. 3' B.G.L.<br>Welded on plate<br>W/Riser and well Identifier |

The following logs have been run BHCS, FD, DIL  
Other operations proposed

Operations to be carried out by Kenting Petrolia Drill Contractor Licence No. 0230  
Address 700, 6 Ave. S.W., Calgary, Alberta Ltd. Address

Responsible Agent in field R. Ross

Dated at Calgary, Alta., this 19 Day of April 1973

Signed by [Signature] Company Pacific Petroleum Ltd.

Title Frontier Operations Manager Operator's Exploratory Licence No. 1448

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

(For OIL AND MINERAL DIVISION use only)

APPROVAL

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

Dated 30-APR-73, 19

R. L. Price  
District Conservation Engineer



N° de l'autorisation de forage. ....

MINISTÈRE DES AFFAIRES INDIENNES ET DU NORD CANADIEN  
DIVISION DU PÉTROLE ET DES MINÉRAUX

**Demande d'abandon d'un puits ou de suspension du forage**

Conformément au «Règlement sur les terres pétrolifères et gazifères du Canada», nous demandons l'autorisation d'abandonner le puits ci-après ou de suspendre les travaux de forage

Nom et n° du puits .....  
Emplacement: Unité ..... Section ..... Étendue quadrillée .....  
Latitude ..... Longitude .....  
Code d'ordinateur .....  
Références universelles d'emplacement du puits .....  
No de permis ..... No de concession .....

Date du début d'exécution du programme projeté ..... (Défendeur de permis ou de licence, ou concessionnaire)

PÉTROLE, GAZ ET EAU  
(Profondeur)

Pétrole à .....  
Gaz à .....  
Eau à .....  
Profondeur globale ..... Date des derniers travaux .....  
État actuel du puits .....  
.....  
.....

**TUBAGE**

| Diamètre extérieur<br>(en pouces) | Poids | Longueur | Fixation à | Sacs de ciment et d'additifs | Longueur<br>récupérée |
|-----------------------------------|-------|----------|------------|------------------------------|-----------------------|
| 1. ....                           | ..... | .....    | .....      | .....                        | .....                 |
| 2. ....                           | ..... | .....    | .....      | .....                        | .....                 |
| 3. ....                           | ..... | .....    | .....      | .....                        | .....                 |
| 4. ....                           | ..... | .....    | .....      | .....                        | .....                 |
| 5. ....                           | ..... | .....    | .....      | .....                        | .....                 |

**PROGRAMME D'ABANDON PROJETÉ**

| Bouchon |            | Formation géologique | Nombre de<br>sacs de ciment | Remarques |
|---------|------------|----------------------|-----------------------------|-----------|
| N°      | Profondeur |                      |                             |           |
| .....   | .....      | .....                | .....                       | .....     |
| .....   | .....      | .....                | .....                       | .....     |
| .....   | .....      | .....                | .....                       | .....     |
| .....   | .....      | .....                | .....                       | .....     |
| .....   | .....      | .....                | .....                       | .....     |
| .....   | .....      | .....                | .....                       | .....     |
| .....   | .....      | .....                | .....                       | .....     |
| .....   | .....      | .....                | .....                       | .....     |
| .....   | .....      | .....                | .....                       | .....     |

Les diagrammes suivants ont été tracés: .....

Autres travaux projetés .....  
.....

Les travaux seront exécutés par ..... N° de permis de l'entrepreneur .....

Adresse ..... Adresse .....

Agent extérieur responsable .....  
Fait à ..... le ..... 19.....

Signé par ..... Société .....

Titre ..... N° de licence de sondage de l'exécutant .....

**Nota:** Aviser le bureau de l'ingénieur en conservation du district avant de commencer les travaux

(À l'usage de la Division du pétrole et des minéraux)

**APPROBATION**

Demande étudiée et programme approuvé, sous réserve des conditions suivantes:

.....  
.....  
.....  
.....

Date ..... 19.....

Ingénieur en conservation du district

Présenter les formules en triple exemplaire à l'ingénieur en conservation du district  
ministère des Affaires indiennes et du Nord canadien.

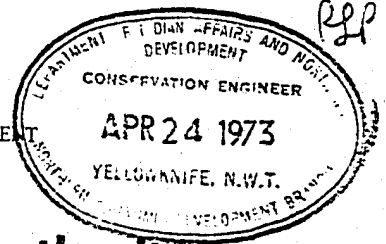
LAND 52-90-5 (7-71)

See Reverse



Drilling Authority No. . . . 654 . . . . .

DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT  
OIL AND MINERAL 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. . . . . 654 . . . . ., concerning . . . . .

. . . . . Pacific HB. Alexandra 0-54 . . . . .  
(Name and Number of Well)

Reasons for the amendments: . . . . .

. . . . . Change Total Depth. from 3,775. to 4,000 . . . . .

Dated at Calgary, Alberta . . . this . . 19 . . . . . day of . . April . . . . . 1973

Signed by . . . . . *R. L. Price*

Title . . . Frontier Operations Manager . . . . .

Company . . . Pacific Petroleum Ltd. . . . .

(For Oil and Mineral Division use only)

APPROVED

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

. . . . . FTD - 3890'

Date . . 30-APR-73 . . , 19 . . . . . *R. L. Price*  
District Conservation Engineer



MINISTÈRE DES AFFAIRES INDIENNES ET DU NORD CANADIEN  
DIVISION DU PÉTROLE ET DES MINÉRAUX

## Demande de modification d'une autorisation de forage

La présente demande doit être remplie en trois exemplaires, puis présentée et approuvée avant le début des travaux. Si l'emplacement du (des) puits est modifié, la demande doit être accompagnée, au besoin, d'un levé approuvé par l'Arpenteur général.

Conformément au Règlement sur les terres pétrolifères et gazifères du Canada, il est demandé par la présente de modifier l'autorisation de forage n° ..... concernant .....

(nom du (des) puits et nombre)

Les modifications ci-après sont demandées: .....

Motifs de la demande: .....

Fait à ....., ce ..... jour de ....., 19.....

Signée par: .....

Poste: .....

Société: .....

(A l'usage de la Division du pétrole et des minéraux)

### APPROBATION

La présente demande a été étudiée et approuvée sous réserve des conditions suivantes: .....

Date: ....., 19.....

Ingénieur en conservation du district

Adresser vos demandes à l'ingénieur en conservation du district,  
Ministère des Affaires indiennes et du Nord canadien.

DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT  
OIL AND MINERAL DIVISION  
RIG INSPECTION REPORT

A. Name and number of Well: Pacific HB Alexandra 0-54  
Location: 60-30N. 117-45 W. Drilling Authority No: 654  
Date of Inspection: March 8/73 Inspection No: 1  
Date of Previous Inspection: \_\_\_\_\_  
Contractor: Kenting Petroleum  
Rig No: 9 Date Spud: 22 Feb 73  
Operation in Progress: Waiting Depth: 3890 Projected total Depth: 3890  
Last Casing in the Hole: Surf Casing String: \_\_\_\_\_ Size: 8 5/8 D. Depth set: 483 ft.  
Liner: \_\_\_\_\_  
Toolpusher: NORM SNYDER Signature: [Signature]  
Operator's Rep: BOB LENTON Signature: [Signature]  
Cons. Eng: SPEE WOOD Signature: [Signature]

B. BLOWOUT PREVENTION EQUIPMENT

API Classification 900  
Stock Arrangement & Specifications Conform to those submitted with D.A. ☐ Yes ☒ No  
Present Arrangement of B.O.P. Stock: ☒ Satisfactory ☐ Unsatisfactory  
Description and location of Pressure Source and B.O.P. Controls: Controls on floor and at light plant  
Describe B.C.P. & Air Intake Shut-off Tests Witnessed Air shut offs OK.

C. MANIFOLD

Manifold Arrangement & Specifications Conform to those submitted with D.A. ☐ Yes ☒ No  
Present Arrangement of B.C.P. Stock: ☒ Satisfactory ☐ Unsatisfactory  
Working Pressure Rating of Manifold 3000 psi

| D. Satisfactory                     | Unsatisfactory           | ITEMS                                                                                                             | Category                     |
|-------------------------------------|--------------------------|-------------------------------------------------------------------------------------------------------------------|------------------------------|
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 1. Posting of Drilling Authority.                                                                                 | Drilling Authority & Report  |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 2. Posting of warning signs (if in H <sub>2</sub> S area) and no smoking signs.                                   |                              |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 3. Recording of all required information in tour reports.                                                         |                              |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 4. B.O.P. equipment appears to be properly connected                                                              | Blowout Prevention Equipment |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 5. B.C.P. equipment tested daily and tests recorded.                                                              |                              |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 6. Equipment was adequately pressure tested before drilling out casing shoe.                                      |                              |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 7. B.C.P. equipment housed, ventilated & heated for winter operations.                                            |                              |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 8. Bleed-off & kill lines adequate and properly tied down.                                                        |                              |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 9. B.C.P. controls and accumulator adequately and properly located.                                               |                              |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 10. Crew properly trained and capable of operating B.C.P. equipment.                                              | Fire Hazards                 |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 11. Engine shut-off controls installed and functional.                                                            |                              |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 12. Engine exhausts properly connected with required safety features.                                             |                              |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 13. Smoking regulation being observed.                                                                            |                              |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 14. Boilers, electric generators, accumulator & fuel supplies at required distance from well and from each other. | Personnel Safety             |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 15. Flare pit, flare line & sump adequate and at required distance from well.                                     |                              |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 16. Fire fighting equipment adequate and maintained.                                                              |                              |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 17. Proper electrical wiring and fittings installed and maintained.                                               |                              |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 18. Adequate first aid kits, stretchers and blankets available and maintained.                                    | General                      |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 19. Radio in 24 hour operation.                                                                                   |                              |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 20. Required personnel have valid first aid certificates.                                                         |                              |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 21. Breathing apparatus - adequate, accessible and maintained.                                                    |                              |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 22. Other required personnel safety equipment.                                                                    | General                      |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 23. General house keeping and indication of good practice.                                                        |                              |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 24. Equipment appears to conform with CEC & WCA standards.                                                        |                              |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 25. Required deviation surveys being run.                                                                         |                              |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 26. Elimination of potential hazardous conditions.                                                                |                              |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 27. Adequacy of contingency plans, equipment and supplies.                                                        |                              |

E. Remarks & Recommendations (Any comments or action required on items listed above and other items detailed in Inspection Guide should be listed here)

Item No.

20. Only one of three drillers has first aid certificate. Informed toolpush that all drillers in Yukon and NWT must have first aid certificates



DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT  
OIL AND MINERAL DIVISION

## Application for a Drilling Authority

This notice of intention to begin drilling operations, in triplicate, and where required a plan of survey approved by the Surveyor General showing the target area or the site 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 . . . . . Pacific HB Alexandra 0-54

Location: Unit . . . . . 0 . . . . . Section . . . . . 54 . . . . . Grid . . . . . 60 - 30 - 117 - 45  
Latitude . . . . . 60° 23' 48" N . . . . . Longitude . . . . . 117° 55' 10" W  
Unique Well Identifier . . . . . 3000546030117450  
Universal Well Location Reference . . . . . Lat. 60.39666°N., Long. 117.91945°W.

Elevation: Ground . . . . . 970 (est) . . . . . K.B. . . . . 982 . . . . . feet above sea-level.  
Well is expected to produce from . . . . . Elk Point . . . . . formation at a depth  
of about . . . . . 3350 . . . . . feet. Expected total final depth . . . . . 3775  
Area assigned to well . . . . . Exploratory  
(for District Conservation Engineer's use only)

Permit No. . . . . 4138 . . . . . Lease No. . . . . Acreage . . . . . 63,212  
Permittee, licensee, or lessee . . . . . Hudson's Bay Oil & Gas Co. Ltd.  
Exploratory Licence No. . . . . 1503  
Surface owned by Crown or . . . . . Crown  
(If alienated submit name and address of owner and occupant.)

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 Size O.D. (Inches) | Weight (Lb./Ft.) | Grade          | New or Used   | Estimated Depth | Sacks of Cement |
|---------------------------|------------------|----------------|---------------|-----------------|-----------------|
| 1. . . . . 20"            | . . . . . 60#    | . . . . . J-55 | . . . . . New | . . . . . 40    |                 |
| 2. . . . . 8-5/8"         | . . . . . 24#    | . . . . . J-55 | . . . . . New | . . . . . 450+  | To Surface      |
| 3. . . . . 4-1/2"         | . . . . . 9.5#   | . . . . . J-55 | . . . . . New | . . . . . 3775  | As Required     |
| 4. . . . .                |                  |                |               |                 |                 |
| 5. . . . .                |                  |                |               |                 |                 |

Expected water, gas, and oil horizons and type of control equipment. . . . . Water, Gel. - double gate Shaffer  
. . . . . Oil - Elk Point  
. . . . . Gas - Elk Point  
. . . . . Water - Elk Point

Well will be drilled with Rotary Rig No. . . . . 9 . . . . . by . . . . . Kenting Petrolia Drilling Ltd.  
(Drilling Contractor or company)

Responsible agent of applicant:- Contractor's Business Licence No. . . . . 0230  
At well . . . . . R. Ross . . . . . At registered office. H. W. Leiper  
Address . . . . . Address . . . . . P.O. Box 6666, Calgary, Alberta  
It is understood that if changes become necessary, notice of the change of plan will be submitted.  
Dated at . . . . . Calgary, Alberta . . . . . this . . . . . 19th . . . . . day of . . . . . December . . . . . 19 72  
Signed by . . . . . H. W. Leiper . . . . . Company . . . . . Pacific Petroleum Ltd.  
Title . . . . . Frontier Operations Mgr. . . . . Operator's Licence No. . . . . 1448

(For Oil and Mineral Division use only)

### APPROVED

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

See attached list of Conditions of Approval.

Dated . . . . . 10-JAN-73 . . . . . 19 . . . . . R. L. Price

Forms to be submitted to District Conservation Engineer,  
Department of Indian Affairs and Northern Development.



MINISTÈRE DES AFFAIRES INDIENNES ET DU NORD CANADIEN  
DIVISION DU PÉTROLE ET DES MINÉRAUX

# **Demande d'autorisation de forage**

Avant de commencer les travaux, soumettre (en triple exemplaire) et faire approuver le présent avis (indiquant l'intention d'entreprendre des travaux de forage) et, au besoin, un plan d'arpentage reconnu par l'arpenteur général, montrant l'aire de sondage ou l'emplacement du puits.

Conformément au «Règlement sur les terres pétrolifères et gazifères du Canada», nous demandons l'autorisation d'effectuer des travaux de forage.

Nom et n<sup>o</sup> du puits .....

Emplacement: Unité ..... Section ..... Étendue quadrillée .....

Latitude ..... Longitude .....

Code d'ordinateur .....

Références universelles d'emplacement du puits: .....

Élévation: du sol ..... du carré d'entraînement ..... pieds au-dessus du niveau de la mer

Production prévue quand les tiges atteindront la formation ..... à une profondeur approximative de

..... pieds. Profondeur totale prévue .....

Superficie assignée au puits ..... (à l'usage de l'ingénieur en conservation du district)

N<sup>o</sup> de permis ..... N<sup>o</sup> de concession ..... Superficie .....

Détenteur de permis ou de licence, ou concessionnaire .....

N<sup>o</sup> de permis de prospection .....

Terres appartenant à la Couronne ou à ..... (Dans le cas de terres aliénées, donner le nom et l'adresse du propriétaire et de l'occupant)

Détenteur(s) des droits pétroliers et gaziers .....

Nous prévoyons utiliser les colonnes de tubage suivantes et de les cimenter ou de les sceller, tel qu'il est indiqué ci-dessous: -

| Diamètre extérieur (en<br>pouces) de tubages | Poids (liv./pi.) | Qualité | Tubages neufs ou usagés | Profondeur<br>estimative | Sacs de ciment |
|----------------------------------------------|------------------|---------|-------------------------|--------------------------|----------------|
| 1. ....                                      | .....            | .....   | .....                   | .....                    | .....          |
| 2. ....                                      | .....            | .....   | .....                   | .....                    | .....          |
| 3. ....                                      | .....            | .....   | .....                   | .....                    | .....          |
| 4. ....                                      | .....            | .....   | .....                   | .....                    | .....          |
| 5. ....                                      | .....            | .....   | .....                   | .....                    | .....          |

Nappes d'eau, de gaz et de pétrole prévues et genre de matériel anti-éruption. ....

Le puits sera foré à l'aide de la tour rotary n<sup>o</sup> ..... par ..... (Entrepreneur ou société de forage)

Agent responsable pour le requérant: - N<sup>o</sup> de permis de l'entrepreneur .....

Sur le chantier. .... Au siège .....

Adresse ..... Adresse .....

Il est entendu que, dans le cas de modifications indispensables, un avis sera soumis.

Datée - ..... le ..... 19.....

Signé par ..... Société. ....

Titre ..... N<sup>o</sup> de licence de sondage de l'exécutant .....

(À l'usage de la Division du pétrole et des minéraux)

## **APPROBATION**

Demande étudiée et approuvée sous réserve des conditions suivantes:

Date ..... 19.....

Ingénieur en conservation du district

Présenter les formules à l'ingénieur en conservation du district,

Ministère des Affaires indiennes et du Nord canadien.

WELL Pacific HB Alexandra O-54

1. Copies of this Drilling Authority Form and Daily Drilling Report Preparation Requirements Card, shall be posted in full view at the drilling rig, in both the doghouse and drilling foreman's office between spud and rig release dates.
2. The company will submit to this office, on Tuesday morning of each week, a day-by-day progress report summary, on the well, for the past week. (See daily drilling report preparation requirements card for pertinent details.) Phoned-in report format shall be in this order - well name, location, present depth, present activity in progress and past day's pertinent details.
3. All shows (small or large) of oil & gas are to be reported immediately.
4. When a fatal accident occurs the District Conservation Engineer is to be notified immediately and drilling ahead must cease. Permission to resume operations must be granted by the District Conservation Engineer after a fatality.
5. All waste materials on and around the wellsite area, shall be disposed of in a manner that will prevent pollution to adjacent areas. Burnables shall be burned and non-burnables shall be buried with adequate cover or hauled away.
6. Prior to moving to drilling site, a Land Use Permit, for access and a Water Use Permit must be obtained from the Water, Forests and Land Division, Yellowknife. We further draw your attention to Sections 95 and 96 of the Canada Oil & Gas Land Regulations.
7. Forward to this office two (2) field prints of all well logs (except Velocity logs) including copies of core analysis and fluid analysis as soon as they are available.
8. Any changes to, or additions to the approved Drilling Authority must have prior approval of the District Conservation Engineer. For example: total depth, casing depths/specs., location coordinates, well name, datum elevations, operator, contractor.
9. Surface casing to be set 50 feet (min.) into a consolidated formation at the approved depth.
10. 3000# W.P. (Ser. 900) B.O.P.'s are required to 12,000 ft. (max.)  
5000# W.P. (Ser. 1500) B.O.P.'s are required below 12,000 ft.
11. You are required to notify the Yellowknife Office twenty-four (24) hours before spudding.

PRELIMINARY

GEOLOGICAL PROGNOSIS

WELL NAME: Pacific Alexandra 0-54  
LOCATION: 60° 30' N., 117° 45' W.  
ELEVATIONS: Ground: 958' (est.) Kelly Bushing: 970' (est.)

| <u>Geological Markers</u> | <u>Subsea</u> | <u>Depth</u> |
|---------------------------|---------------|--------------|
| Devonian                  | + 820'        | 150'         |
| Jean Marie                | - 100'        | 1070'        |
| Slave Point               | -2090'        | 3060'        |
| Elk Point Dolomite        | -2380'        | 3350'        |
| Chinchaga                 | -2765'        | 3735'        |
| Pre-Cambrian              | -2790'        | 3760'        |
| Total Depth               | -2805'        | 3775'        |

Permafrost not expected to be encountered.

PROGRAM:

1. Drill 20 to 25 feet into Elk Point porosity and run a drill-stem test. If production is obtained, core and test by 60 foot intervals until out of porosity or until formation water is encountered.
2. Repeat above program for Chinchaga porosity.
3. Drill 15 feet into the Pre-Cambrian and run logs.
4. Further drill-stem testing will depend on log evaluations.

SAMPLES:

Pacific - one set, 10' intervals from surface to total depth.  
HBOG - to be determined.  
Department of Indian Affairs & Northern Development - to be determined.

ANALYSES:

Core (porous sections only) - full diameter analysis.  
Oil, gas and water recovered from all DST's. Water recovered from DST's (three samples - top, middle and bottom of recoveries).

LOGS: (Schlumberger)

DIL

- 2" - 100', total depth to surface casing.  
(linear 0-50 ohm m<sup>2</sup>/m scale)  
5" - 100', total depth to 100' above the Slave Point.  
(logarithmic scale)

(BHC) GR/Sonic-Caliper (40-60-80 scale over carbonates)  
1' spacing

2" - 100', total depth to surface.

5" - 100', total depth to 100' above the Slave Point.

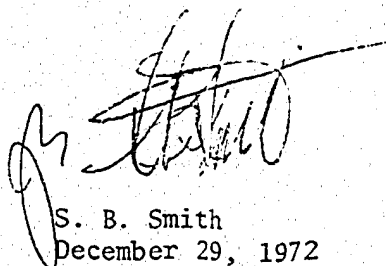
REQUIREMENTS:

|                            | <u>Field</u> | <u>Logs</u> | <u>Final</u> | <u>Analyses</u> | <u>DST Reports</u> |
|----------------------------|--------------|-------------|--------------|-----------------|--------------------|
| Pacific (Ft. St. John)     | 3            | -           | -            | 1               | 1                  |
| Pacific (Calgary)          | 2            |             | 2            | 2               | 2                  |
| HBOG                       | 2            |             | 2            | 2               | 2                  |
| Department of Ind. Affairs | -            |             | 3            | 3               | 3                  |

PARTNERS WITH DERRICK FLOOR PRIVILEGES:

Hudson's Bay Oil & Gas Ltd.

WDK/clr

  
S. B. Smith  
December 29, 1972

PACIFIC ALEXANDRA 0-54  
DRILLING PROGRAM

|                    |                         |
|--------------------|-------------------------|
| Location:          | 60° 30' N, 117° 45' W   |
| Proposed T.D.:     | 3775' (Precambrian)     |
| Objective Horizon: | Elk Point (Oil and Gas) |
| K.B. Elevation:    | 970' (est.)             |

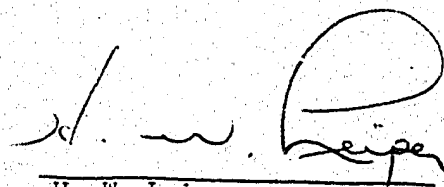
Proposed General Program:

1. Drill 12½" hole to 700 feet.
2. Run 8 5/8" 24#/ft. J-55 casing to bottom. Cement full length using neat construction cement plus 2% CaCl<sub>2</sub>.
3. Drill out the 8 5/8" casing shoe using a 7 7/8" bit. Then drill ahead 7 7/8" hole.
4. Drill 50' into the Precambrian zone, top estimated at 3760 K.B.
5. Test as required from log analysis.

Mud System:

- 0 - 700' There is a possibility of encountering gravel in some sections of the surface hole. As such, maintain YP values in the order of 30, with viscosity in the order of 70 to 80 sec/ft. until gravel is encountered. Annular velocity in the range of 100 should be satisfactory until gravel is encountered. When gravel is encountered, increase YP to the 50 to 60 range increasing velocity to about 150 sec/ft. With these mud conditions, annular velocity should be reduced to about 70 ft/min. to reduce erosion.
- 700' - TD This section of hole should be drilled using a low solids gel CMC system. It should be noted that at Cameron M-05, water was employed for the top section of hole. This resulted in hole problems and a stuck pipe situation on the third day. To avoid this possibility, the low solids gel CMC system should be used immediately below the surface casing shoe. A mixing ratio of one bag of reg. CMC to 12 bags of gel, adjusting to viscosity as required, will maintain yield points that are suitable while providing good water loss control and a good velocity profile. This system should be maintained in the 9.0 lb/gal. range if possible.

WLF/lk  
January 2, 1973

  
H. W. Leiper,  
Frontier Operations Manager

FILL UP LINE

SPLIT DRILL  
THROUGH NIPPLE

FLOW LINE

CLAMP WELDED OR  
BOLTED SECURELY  
TO MUD TANK

MUD TANK

TEST LINE TO BE 2 FT.  
ABOVE FLOOR LEVEL

TO RETURN STEAM LINE  
(NOT OPEN INTO CELLAR)

PACIFIC

| MARK | NO REQ | DESCRIPTION                                                       |
|------|--------|-------------------------------------------------------------------|
| 23   | 2      | 2" SER. 900 RTJ FLANGED R/P GATE VALVE.                           |
| 24   | 1      | CEMENT FLARE LINE ANCHOR BLOCK.                                   |
| 25   | 1      | 2" SER. 900 RTJ FLANGED ADJUSTABLE CHOKE.                         |
| 26   | 1      | 12" NOMINAL SER. 900 CASING BOWL W/ 2-2" 900 RTJ FLANGED OUTLETS. |
| 27   | 1      | 2" SER. 900 COMP. FLANGE - 2" L.P.                                |

SUBSTRUCTURE

MOUSE HOLE

KILL LINE

OR  
SITATION

RIG MATTING LEVEL

GROUND LEVEL

CONTRACTOR

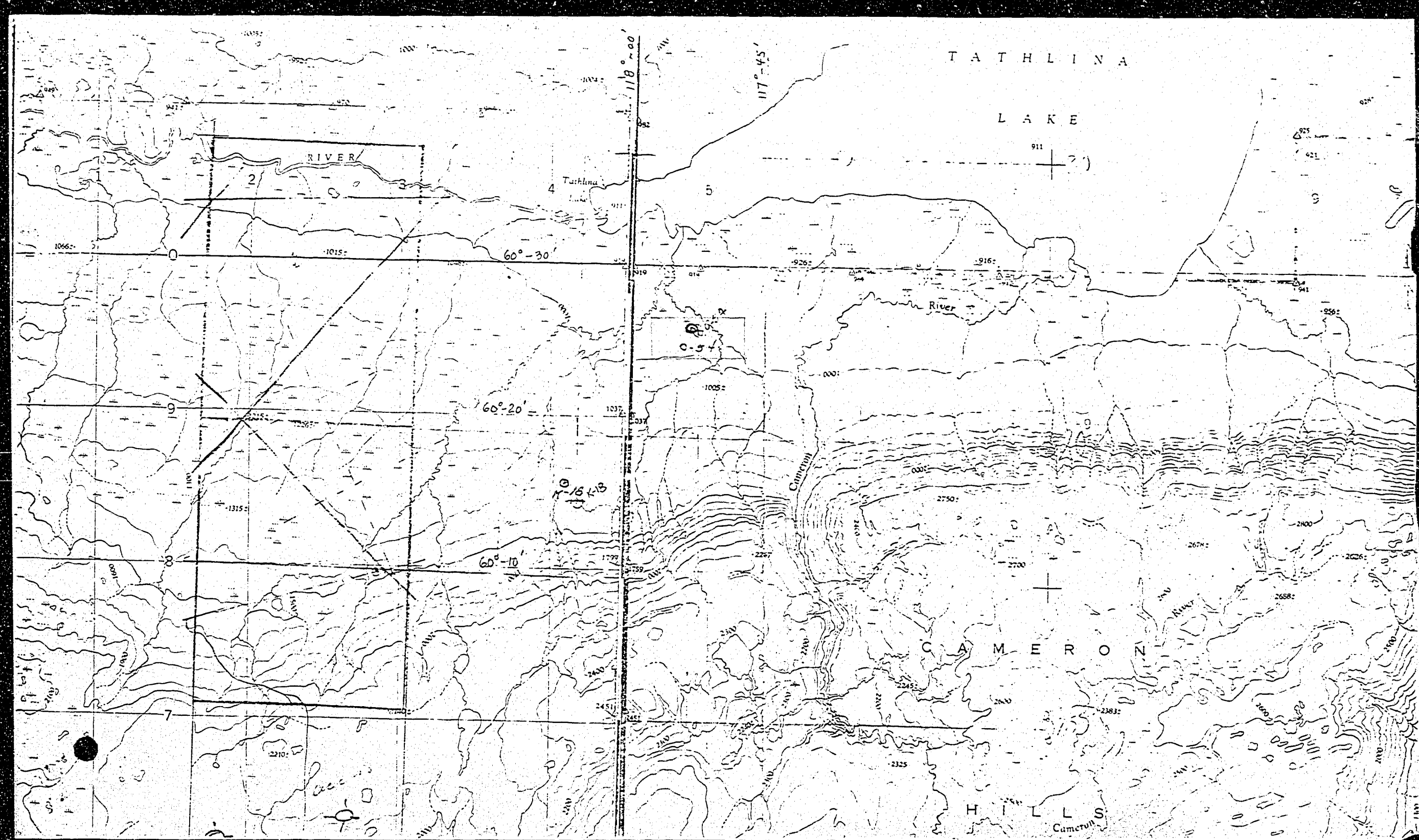
| MARK | NO REQ   | DESCRIPTION                                                                                                 |
|------|----------|-------------------------------------------------------------------------------------------------------------|
| 1    | 6        | 3" SER. 900 RTJ FLANGED FULL OF ALL STEEL GATE VALVE.                                                       |
| 2    | 1        | 12" SER. 900 DOUBLE GATE 'SHAFFER' (OR EQUAL) HYDRAULIC BLOW OUT PREVENTER. PIPE RAMS BOTTOM BLANK RAMS TOP |
| 3    | 1        | 12" x 12" x 3" x 3" SPOOL RTJ.                                                                              |
| 4    | 1        | 12" SER. 900 HYDRIL (OR EQUAL) BLOW OUT PREVENTER.                                                          |
| 5    | 2        | 3" SCH. 80 LINE PIPE, 5A - MINIMUM 15 FT.                                                                   |
| 6    | 4        | 3" SCH. 80 45° L.R. WELD ELLS.                                                                              |
| 7    | 3        | 2" SCH. 80 LINE PIPE.                                                                                       |
| 8    | 2        | 150' DRILL PIPE (FLARE LINE)                                                                                |
| 9    | 6        | 3" SER. 900 RTJ W.N. FLANGE.                                                                                |
| 10   | 1        | 150' - 2 7/8" 6.5" 8 RD THD. EUE TUBING (FLARE LINE)                                                        |
| 11   | 1        | 2" x 2" x 2" RTJ FLANGED SER. 900 TEE.                                                                      |
| 12   | 1        | 2" SER. 900 RTJ FLANGED ADJ. CHOKE.                                                                         |
| 13   | 1        | 2" SER. 900 CHECK VALVE.                                                                                    |
| 14   | 1        | 2" SER. 900 ALL STEEL VALVE.                                                                                |
| 15   | 1        | 2" SCH. 80 45° L.R. WELD ELL.                                                                               |
| 16   | 2        | 3" SCREWED GATE VALVE - 1000*                                                                               |
| 17   | 1        | 3" LINE PIPE W/ 1/2" COLLAR MIN. 12" FROM END.                                                              |
| 18   | 1        | 2" LINE PIPE W/ 1/2" COLLAR MIN. 8" FROM END.                                                               |
| 19   | 1        | 2" SCREWED GATE VALVE - 1000*                                                                               |
| 20   | 1        | 12" x 12" SER. 900 RTJ SPACER SPOOL.                                                                        |
| 21   | as shown | 3/4" BRAIDED STEAM HOSE FOR WINTER OPERATION.                                                               |
| 22   | 1        | 2" x 3" 900 ADAPTER FLANGE OR SPOOL.                                                                        |

NOTE: ALL BOP CONTROLS MUST BE OPERATIVE FROM A REMOTE STATION 75 FT. FROM WELL BORE. ALL SPOOLS MUST HAVE I.D. TO API SPECIFICATIONS. VALVES MUST BE INSTALLED AS SHOWN. SHAFFER IS SHOWN WITHOUT MANUAL CONTROL ARMS FOR SIMPLICITY, BUT MUST BE INSTALLED AND OPERATIVE.

PACIFIC PETROLEUMS LTD.  
CALGARY, ALBERTA

BLOWOUT PREVENTER  
SPECIFICATIONS FOR  
FT. NELSON DRILLING

SCALE N.T.S.  
DWG. NO. B 100,100  
SH. NO. L-22



WELL HISTORY SUMMARY REPORT

PACIFIC HB ALEXANDRA O-54

Lat. 60° 23' 48" North;  
Long. 117° 55' 10" West

667-11-04-044

DRILLING AUTHORITY #654

WELL HISTORY SUMMARY REPORT



PACIFIC HB ALEXANDRA 0-54

PACIFIC PETROLEUMS LTD.  
P. O. BOX 6666  
CALGARY, ALBERTA T2P 6T6

Compiled by: M. M. Neeser  
M. M. Neeser

Submitted by: H. W. Leiper  
H. W. Leiper  
Frontier Operations Manager

Date:

April 27, 1973

PACIFIC PETROLEUMS LTD.  
WELL HISTORY SUMMARY REPORT  
PACIFIC HB ALEXANDRA-0-54

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PACIFIC PETROLEUMS LTD.  
WELL HISTORY SUMMARY REPORT  
PACIFIC HB ALEXANDRA 0-54

i. SUMMARY OF WELL DATA

- (a) Well Name: Pacific HB Alexandra 0-54
- (b) Permittee: Hudson's Bay Oil & Gas Co. Ltd.
- (c) Operator: Pacific Petroleum Ltd.  
P. O. Box 6666  
Calgary, Alberta T2P 6T6
- (d) Location: Unit 0 Section 54  
Grid: 60-30-117-45  
Lat. 60°23'48" N., Long. 117°55'10" W.  
Unique Well Identifier: 3000545030117450
- (e) Co-Ordinates: Not applicable
- (f) Permit No.: 4138
- (g) Drilling Contractor: Kenting Petrolia Drilling Ltd.  
Rig No. 9  
License No.: 0230
- (h) Drilling Authority: No. 654
- (i) Classification: Exploratory Wildcat
- (j) Elevations: Ground: 970'  
K.B.: 982.50'  
K.B. to Ground: 12.50'
- (k) Date Spudded: February 22, 1973
- (l) Completed Drilling: March 6, 1973
- (m) Total Depth: 3890'  
P.B.T.D.: Surface
- (n) Status: ABANDONED
- (o) Date Drilling Rig Released: March 10, 1973: 8:00 A.M.
- (p) Hole Sizes to T.D.: 8 5/8" - 0 to 537  
7 7/8" - 537 to 3890 T.D.

1. SUMMARY OF WELL DATA - Cont'd.(q) Surface Casing::

Ran and set 12 joints - 8 5/8" 24# KS ST&C, 8rd, Range 3 Japanese casing for a total of 470.50'. Landed at 483' K.B. with 275 sacks construction cement. Plug down at 12:30 P.M. on February 26, 1973.

2. GEOLOGICAL SUMMARY(a) Formation Tops::

K.B. 970'

|                    | <u>Sample</u> |               | <u>Log</u>   |               |
|--------------------|---------------|---------------|--------------|---------------|
|                    | <u>Depth</u>  | <u>Subsea</u> | <u>Depth</u> | <u>Subsea</u> |
| Fort St. John      | 41'           | + 929'        |              |               |
| Devonian           | 162'          | + 808'        | 162'         | + 808'        |
| Trout River        | 1065'         | - 95'         | 1065'        | - 95'         |
| Grumbier           | 1175'         | - 205'        |              |               |
| Alexandra          | 1627'         | - 657'        |              |               |
| Hay River Shale    | 1815'         | - 845'        |              |               |
| Muskwa             | 3070'         | - 2100'       | 3049'        | - 2079'       |
| Slave Point        | 3171'         | - 2201'       | 3166'        | - 2196'       |
| Watt Mountain      | 3355'         | - 2385'       | 3363'        | - 2393'       |
| Sulphur Point      | 3373'         | - 2403'       | 3381'        | - 2411'       |
| Elk Point Dolomite | 3416'         | - 2446'       | 3412'        | - 2442'       |
| Anhydrite (Muskeg) | 3460'         | - 2490'       | 3455'        | - 2488'       |
| Keg River          | 3515'         | - 2545'       | 3512'        | - 2542'       |
| Lower Keg River    | 3758'         | - 2788'       | 3752'        | - 2782'       |
| Chinchaga          | 3814'         | - 2844'       | 3807'        | - 2837'       |
| PreCambrian        | 3865'         | - 2895'       | 3863'        | - 2893'       |
| Total Depth        | 3890'         |               | 3890'        |               |

(b) Cored Intervals:: None.(c) Sample Descriptions::

0- 41 Glacial till.

TOP OF FORT ST. JOHN SHALE 41 (+ 929)

41- 162 Shale: medium grey, occasionally dark brownish grey, fissile, slightly micromicaceous, trace pyrite, occasional bentonite bands near base.

2. GEOLOGICAL SUMMARY - Cont'd.(c) Sample Descriptions - Cont'd.

## TOP OF DEVONIAN 162 (+808)

- 162- 210 Limestone: cream, crypto to microcrystalline, dense, trace fossil shadow, trace calcite veins.
- 210- 250 Limestone: cream to light grey, crypto to microcrystalline, dense, rare crinoids, rare calcite veins.
- 250- 280 Limestone: cream, cryptocrystalline, dense, trace pyrite.
- 280- 300 Limestone: cream to light grey, crypto to microcrystalline, partly silty, dense, trace pyrite, possibly stylolitic.
- 300- 400 Limestone: cream to light grey, crypto to microcrystalline, partly silty, occasional fossils, occasional calcite veins, dense, trace calcareous; very fine grained Sandstone.
- 400- 440 Limestone: cream to light grey, cryptocrystalline, partly slightly argillaceous, dense.
- 440- 480 Limestone: cream to light grey, cryptocrystalline.
- 480- 540 Limestone: as above, fossiliferous, trace calcite veins, trace silty, calcareous; Sandstone.
- 540- 590 Limestone: cream, crypto to microcrystalline, partly arenaceous, partly silty, occasionally grading to Siltstone: dense.
- 590- 690 Limestone: cream, crypto to microcrystalline, partly slightly silty.
- 690- 720 Limestone: cream to light grey, crypto to microcrystalline, partly silty, fossiliferous; dense, interbedded minor Sandstone: light grey, fine grained, calcareous, silty, tight.
- 720- 740 Limestone: as above, trace Sandstone and Siltstone.
- 740- 810 Limestone: cream to light brown, crypto to microcrystalline, silty, fossiliferous, occasional calcite veins, dense.
- 810- 830 Limestone: as above; minor Siltstone: medium brown, calcareous, argillaceous, partly sandy, trace pyrite.
- 830- 870 Limestone: as above, trace Siltstone.

2. GEOLOGICAL SUMMARY(c) Sample Descriptions - Cont'd.

- 870- 940 Limestone: as above; minor Siltstone: as above.
- 940- 970 Limestone: cream to light brown, crypto to microcrystalline, partly silty, dense; interbedded Siltstone: medium brown, calcareous, partly sandy.
- 970- 990 Limestone: buff to light brown, crypto crystalline, occasionally microcrystalline, partly slightly silty, fossiliferous, dense, trace Siltstone.
- 990-1040 Limestone: as above; interbedded with minor Siltstone: light grey, calcareous; partly sandy; trace pyrite.
- 1040-1065 Interbedded Limestone and Siltstone: as above; trace Sandstone: light grey, calcareous, silty, tight.
- TOP OF TROUT RIVER: 1065' (- - 95)
- 1065-1100 Limestone: buff to light brown, crypto to microcrystalline, partly silty, dense; interbedded Sandstone: greenish grey, very fine grained, calcareous, silty, tight; minor Siltstone: trace Shale.
- 1100-1130 Siltstone: light grey, calcareous, partly sandy, interbedded Limestone: as above, very fossiliferous, trace Sandstone and Shale.
- 1130-1140 Sandstone: light grey, very fine grained, calcareous, silty, tight, interbedded Limestone and Siltstone and Shale.
- 1140-1175 Siltstone: light greenish grey, calcareous, sandy, interbedded Limestone: light brown, microcrystalline, silty, dense; trace Shale and Sandstone.
- TOP OF GRUMBLER: 1175' (- - 205)
- 1175-1230 Shale: green grey, fissile, slightly calcareous; interbedded Siltstone: light grey, greenish grey, calcareous, sandy, slightly micaceous, trace pyrite.
- 1230-1280 Siltstone: as above, occasionally grading to Sandstone: interbedded minor Shale: as above.

2. GEOLOGICAL SUMMARY(c) Sample Descriptions - Cont'd.

- 1280-1310 Shale: greenish grey, partly slightly calcareous, slightly micromicaceous, fissile, interbedded Siltstone: as above, occasionally grading to Sandstone.
- 1310-1340 Shale: reddish brown, greenish grey, slightly calcareous, fissile, interbedded minor Siltstone: as above.
- 1340-1370 Siltstone: light grey, light green, sandy, calcareous, occasionally grading to Sandstone; interbedded minor Shale: as above.
- 1370-1390 Shale: grey green, fissile, interbedded minor Siltstone: as above.
- 1390-1410 Shale: green, brown, partly silty; interbedded minor Siltstone: light grey green, calcareous; argillaceous.
- 1410-1470 Shale: green, occasionally brown, occasional fissile fragments, trace Siltstone; trace pyrite.
- 1470-1490 Siltstone: light grey, calcareous, argillaceous, interbedded minor Shale: as above.
- 1490-1510 Shale: grey, brown, silty, fissile, slightly micromicaceous, interbedded minor Siltstone: as above; trace Sandstone and pyrite; occasional fossils.
- 1510-1600 Siltstone: light grey, calcareous, sandy, occasionally grading to Sandstone; interbedded Shale: as above; trace pyrite.
- 1600-1627 Siltstone: as above; interbedded Shale: green, fissile, partly slightly calcareous; trace Limestone.
- TOP OF ALEXANDRA 1627 (-657)
- 1627-1640 Siltstone: light grey, calcareous, sandy, interbedded minor Limestone: cream, crypto to microcrystalline, silty, dense.
- 1640-1660 Limestone: as above; interbedded Siltstone and Shale: as above.
- 1660-1710 Siltstone: as above; interbedded with very fossiliferous Limestone: as above; minor Sandstone and Shale.

2. GEOLOGICAL SUMMARY(c) Sample Descriptions - Cont'd.

- 1710-1730 Siltstone: as above; interbedded Sandstone and Shale; trace Limestone.
- 1730-1740 Sandstone: light grey, very fine grained, very calcareous, silty, tight; interbedded Shale and Siltstone: as above.
- 1740-1760 Limestone: as above; crinoids common; minor Siltstone; grading in parts to Sandstone.
- 1760-1815 Siltstone: light grey, grey, calcareous, sandy, in parts grading to Sandstone; interbedded Limestone and Shale: as above.
- TOP OF HAY RIVER SHALE 1815 (-845)
- 1815-1840 Shale: green, brown, partly slightly calcareous, interbedded minor Siltstone and Limestone: as above.
- 1840-1850 Shale: as above; interbedded Sandstone and trace Limestone crinoids.
- 1850-1930 Shale: green, occasionally brown, partly calcareous, fissile, interbedded minor Siltstone; grading in parts to Sandstone; minor Limestone: light grey, microcrystalline, partly silty, very fossiliferous (shell fragments, crinoids, corals).
- 1930-1940 Shale: as above; interbedded Siltstone: as above.
- 1940-2040 Limestone: cream to light brown, cryptocrystalline, partly silty, very fossiliferous; dense; interbedded minor Siltstone and Shale.
- 2040-2060 Shale: green, brown, fissile, partly calcareous; interbedded minor Siltstone and Limestone.
- 2060-2420 Shale: grey green, occasionally brown, partly slightly calcareous, partly silty, fissile; interbedded minor Siltstone: light grey, greenish grey, calcareous, partly grading to Sandstone; trace Limestone.
- 2420-2660 Shale: as above; trace to minor Siltstone interbeds.
- 2660-2810 Shale: as above; trace Siltstone and Limestone.
- 2810-2890 Shale: greenish grey, medium grey, fissile, slightly micaceous.
- 2890-3020 Shale: greenish grey, occasionally dark brownish grey, bituminous, slightly dolomitic.

2. GEOLOGICAL SUMMARY(c) Sample Descriptions - Cont'd.

- 3020-3050 Shale: grey, occasionally dark brownish grey, as above; trace Limestone.
- 3050-3070 Shale: as above, occasionally dark grey brown, bituminous, blocky and micromicaceous; trace Limestone and pyrite.
- TOP OF MUSKWA 3070 (-2100)
- 3070-3110 Shale: medium to dark greyish brown, bituminous, blocky, slightly calcareous.
- 3110-3140 Shale: greenish grey, brownish grey, fissile, slightly micromicaceous; trace Limestone.
- 3140-3171 Shale: as above, occasionally dark greyish brown, interbedded minor Limestone: light grey to grey, cryptocrystalline, partly argillaceous, dense; trace pyrite.
- TOP OF SLAVE POINT 3171 (-2201)
- 3171-3190 Limestone: light brown, microcrystalline, partly slightly silty, partly slightly argillaceous, occasional fossils, dense.
- 3190-3210 Limestone: light to medium brown, occasionally dark brown, microcrystalline, slightly argillaceous, partly bituminous, partly slightly dolomitic, mottled, dense.
- 3210-3230 Limestone: as above, light to dark brown, rare calcite crystals, suggest veins.
- 3230-3260 Limestone: as above, occasional calcite crystals, suggests possible vugs, occasional fossils.
- 3260-3280 Limestone: light to dark brown, microcrystalline, partly argillaceous, bituminous, dolomitic, dense, rare calcite crystals.
- 3280-3355 Limestone: light brown to tan, microcrystalline, occasionally very finely crystalline, partly slightly argillaceous, dense, rare grain with micro vuggy porosity, rare calcite crystals.
- TOP OF WATT MOUNTAIN 3355 (-2385)
- 3355-3373 Shale: green, grey, waxy, calcareous, fissile; trace Limestone; rare ostracods.
- TOP OF SULPHUR POINT 3373 (-2403)
- 3373-3416 Limestone: cream to light grey, cryptocrystalline, occasional fossils (ostracods, crinoids), dense.

2. GEOLOGICAL SUMMARY(c) Sample Descriptions - Cont'd.

## TOP OF ELK POINT DOLOMITE 3416 (-2446)

- 3416-3430 Dolomite: brown, very finely crystalline, sucrosic, dense.
- 3430-3450 Dolomite: as above, scattered poor occasionally fair pinpoint and intercrystalline porosity.
- 3450-3455 Dolomite: as above, trace pinpoint porosity, interbedded minor Shale.
- 3455-3460 Dolomite: brown, sucrosic to very finely crystalline, poor to fair, pinpoint and intercrystalline porosity, and rare calcite crystals.

## TOP OF ANHYDRITE 3460 (-2490)

- 3460-3515 Anhydrite: light grey to light brown, massive, very slightly dolomitic, interbedded minor Dolomite: light to medium brown, fine to medium crystalline, anhydritic, dense.

## TOP OF KEG RIVER DOLOMITE 3515 (-2545)

- 3515-3530 Dolomite: light brown, microcrystalline, sucrosic, partly anhydritic, poor to fair pinpoint and micro vuggy porosity; minor Anhydrite.
- 3530-3550 Dolomite: as above, occasionally finely crystalline, scattered fair to good micro vuggy porosity; occasional calcite crystals.
- 3550-3570 Dolomite: as above, occasionally pyrobitumen, poor to fair micro vuggy porosity, occasional grain with good micro vuggy porosity.
- 3570-3610 Dolomite: as above, occasional white calcite and dolomite crystals, suggest poor to fair vuggy porosity.
- 3610-3625 Dolomite: as above, scattered fair to good vuggy porosity.
- 3625-3655 Dolomite: brown to medium brown, sucrosic to finely crystalline, occasional euhedral calcite and dolomite crystals, scattered fair vuggy porosity, trace Anhydrite.
- 3655-3680 Dolomite: medium to dark brown, finely crystalline, sucrosic, bituminous, argillaceous, very common large, white dolomite and calcite crystals, suggest possible scattered good vuggy porosity.

## 2. GEOLOGICAL SUMMARY

### (c) Sample Descriptions - Cont'd.

- 3680-3720 Dolomite: as above; scattered poor to fair vuggy porosity.
- 3720-3758 Dolomite: dark brownish grey to white, mottled, very fine to medium crystalline, very bituminous, argillaceous, slightly calcareous, pyrobitumen common, abundant large, white dolomite crystals, suggest scattered good vuggy porosity.
- TOP OF LOWER KEG RIVER 3758 (-2788)
- 3758-3814 Limestone: cream to brown, crypto to microcrystalline, dense, interbedded minor Dolomite.
- TOP OF CHINCHAGA 3814 (-2844)
- 3815-3840 Dolomite: light brown to brown, crypto to microcrystalline, dense, interbedded Anhydrite: buff, massive.
- 3840-3865 Anhydrite: as above; interbedded Dolomite: brown to dark brown, microcrystalline, partly anhydritic, rare grains with slight oil staining, no visible porosity.
- TOP OF PRE-CAMBRIAN 3865 (-2895)
- 3865-3890 Granite: pink, white, arkosic, quartzite and mica.
- TOTAL DEPTH 3890'

### (d) Core Descriptions:

None.

## 3. ENGINEERING SUMMARY

### (a) Drill-Stem Tests:

DST #1: 3500-3635 (Keg River Dolomite) 5-60-90-90  
FAB on PF. FAB on VO steady throughout test. No GTS.  
Recovered 500' sulphurous muddy salt water and 2490'  
sulphurous salt water (46,400 ppm NaCl). HP 1783/1772,  
PF 319, SI 1557/1557, FP 302/1328. BHT 105°.

3. ENGINEERING SUMMARY(a) Drill-Stem Tests:

DST #2: 3170-3240 (Slave Point) 5-60-60-60  
 WAB on PF. WAB on VO decreasing slightly at the end  
 of flow period.. No gas to surface. Recovered 60' black  
 muddy sulphurous salt water and 580' salt water (80,400 ppm  
 NaCl). HP 1631/1631, PF 59, SIP 1390/1390, FP 70/287.  
 BHT 101°.

(b) Casing Records:

See T (q)

(c) Bit Record:

| Bit<br>No. | Make | Type | Size   | Serial<br>No. | Hours<br>On BTM | Depth |     | Footage | Remarks |
|------------|------|------|--------|---------------|-----------------|-------|-----|---------|---------|
|            |      |      |        |               |                 | In    | Out |         |         |
| 1A         | HW   | X3A  | 12 1/4 | 21923         | 8 1/4           | 0     | 241 | 241     |         |
| 2A         | HW   | XIG  | 12 1/4 | LK098         | 7               | 241   | 483 | 242     |         |

NOTE: HW 7 7/8" X3A Serial No. 49680 piloted from 265 to 505, 240',  
 11 1/2 hours. Driller dropped four drill collars from rotary  
 table to bottom. Sheared off three cones.

|   |       |     |       |        |        |      |      |      |        |
|---|-------|-----|-------|--------|--------|------|------|------|--------|
| 1 | SEC   | S44 | 7 7/8 | 913644 | 24     | 505  | 1329 | 824  | 4-2-1  |
| 2 | SEC   | S44 | 7 7/8 | 913642 | 31 1/4 | 1329 | 2408 | 1079 | 5-4-1  |
| 3 | HW    | XIG | 7 7/8 | 50229  | 23 1/4 | 2408 | 3192 | 784  | 6-8-1  |
| 4 | Smith | 4JS | 7 7/8 | LZ690  | 23 1/2 | 3192 | 3665 | 473  | Locked |
| 5 | SEC   | S88 | 7 7/8 | 412581 | 15     | 3665 | 3890 | 225  | 1-1-1  |

TOTAL DEPTH 3890'.

(d) Mud Record:

| Date       | Depth | Weight<br>lbs/US gal. | Viscosity<br>Secs. | Water Loss<br>CC in 30" | Filter Cake<br>32nd in | pH | Remarks  |
|------------|-------|-----------------------|--------------------|-------------------------|------------------------|----|----------|
| 8:00 AM    |       |                       |                    |                         |                        |    |          |
| Feb. 23/73 | 241   | 8.9                   | 80                 |                         |                        |    | Gel Lime |
| Feb. 24/73 | 265   | 9.0                   | 100                |                         |                        |    |          |
| Feb. 25/73 | 431   | 9.0                   | 78                 |                         |                        |    |          |
| Feb. 26/73 | 483   | 9.0                   | 70                 |                         |                        |    |          |

8 5/8" surface casing set at 483' K.B.

|            |     |     |    |  |  |  |  |
|------------|-----|-----|----|--|--|--|--|
| Feb. 28/73 | 537 | 8.4 | 28 |  |  |  |  |
|------------|-----|-----|----|--|--|--|--|

3. ENGINEERING SUMMARY(d) Mud Record - Cont'd.

| Date<br>8:00 AM  | Depth | Weight<br>lbs/US gal. | Viscosity<br>Secs. | Water Loss<br>CC in 30" | Filter Cake<br>32nd in | pH   | Remarks                    |
|------------------|-------|-----------------------|--------------------|-------------------------|------------------------|------|----------------------------|
| Mar. 1/73        | 1266  | 8.6                   | 34                 |                         |                        |      | Gel.                       |
| Mar. 2/73        | 2048  | 9.0                   | 34                 | 11.0                    | 2/32                   | 8.5  | Gel.<br>Soda Ash CMC.      |
| Mar. 3/73        | 2683  | 9.0                   | 34                 | 15.0                    | 2/32                   | 9.0  | Gel<br>Soda Ash.           |
| Mar. 4/73        | 3232  | 9.2                   | 36                 | 15.0                    | 2/32                   | 9.0  | Gel<br>Soda Ash.           |
| Mar. 5/73        | 3665  | 9.2                   | 45                 | 12.0                    | 2/32                   | 10.0 | Gel Cuastic<br>CMC Unical. |
| Mar. 6/73        | 3890  | 9.2                   | 60                 | 10.0                    | 2/32                   | 10.5 | Caustic CMC<br>Soda Ash.   |
| TOTAL DEPTH 3890 |       |                       |                    |                         |                        |      |                            |
| Mar. 7/73        |       | 9.2                   | 80                 | 10.0                    | 2/32                   | 10.5 | Gel                        |

(e) Deviation Record:

| <u>Survey At</u> | <u>Deviation</u> |
|------------------|------------------|
| 85'              | 1/2°             |
| 175'             | 1/2°             |
| 265'             | 1/2°             |
| 338'             | 3/4°             |
| 403'             | 1/2°             |
| 483'             | 1/2°             |
| 537'             | 1/2°             |
| 567'             | 1/2°             |
| 600'             | 1/2°             |
| 630'             | 1/2°             |
| 659'             | 1/2°             |
| 690'             | 1/2°             |
| 720'             | 1/2°             |
| 750'             | 1°               |
| 779'             | 1/2°             |
| 870'             | 1/2°             |
| 901'             | 1/2°             |
| 932'             | 1/2°             |
| 993'             | 1/2°             |
| 1023'            | 1/2°             |
| 1055'            | 1/2°             |
| 1086'            | 1/2°             |
| 1116'            | 1/2°             |

3. ENGINEERING SUMMARY(e) Deviation Record - Cont'd.

| <u>Survey At</u> | <u>Deviation</u> |
|------------------|------------------|
| 1146'            | 1/2°             |
| 1176'            | 1°               |
| 1206'            | 1/2°             |
| 1236'            | 1/2°             |
| 1298'            | 1/2°             |
| 1329'            | 1/2°             |
| 1390'            | 1/2°             |
| 1417'            | 1/2°             |
| 1447'            | 1/2°             |
| 1477'            | 1/2°             |
| 1508'            | 1/2°             |
| 1569'            | 1/2°             |
| 1599'            | 1/2°             |
| 1630'            | 1/2°             |
| 1660'            | 1/2°             |
| 1689'            | 1/2°             |
| 1718'            | 1/2°             |
| 1748'            | 1/2°             |
| 1779'            | 1/2°             |
| 1839'            | 1/2°             |
| 1869'            | 1/2°             |
| 1898'            | 1/2°             |
| 1928'            | 1/2°             |
| 1958'            | 1/2°             |
| 1988'            | 1/2°             |
| 2018'            | 1°               |
| 2048'            | 1°               |
| 2078'            | 1/2°             |
| 2108'            | 1°               |
| 2138'            | 1°               |
| 2169'            | 1°               |
| 2198'            | 1°               |
| 2230'            | 1/2°             |
| 2260'            | 1/2°             |
| 2290'            | 1/2°             |
| 2320'            | 1/2°             |
| 2348'            | 1°               |
| 2378'            | 1/2°             |
| 2400'            | 1/2°             |
| 2438'            | 3/4°             |
| 2501'            | 1/2°             |
| 2530'            | Misrun           |
| 2562'            | 1°               |
| 2592'            | 1°               |
| 2622'            | 1/2°             |
| 2653'            | 1/2°             |
| 2683'            | 1/2°             |
| 2714'            | 1/2°             |
| 2746'            | 1/2°             |

3. ENGINEERING SUMMARY(e) Deviation Record - Cont'd.

| <u>Survey At</u> | <u>Deviation</u> |
|------------------|------------------|
| 2776'            | 1°               |
| 2804'            | 1°               |
| 2837'            | 1°               |
| 2897'            | 1/2°             |
| 2930'            | 1°               |
| 2959'            | 1/2°             |
| 2975'            | 1/2°             |
| 2990'            | 1/2°             |
| 3020'            | 1°               |
| 3050'            | 1/2°             |
| 3049'            | 1/2°             |
| 3082'            | 1/2°             |
| 3112'            | 1/2°             |
| 3143'            | 1/2°             |
| 3171'            | 1/2°             |
| 3192'            | 1/2°             |
| 3192'            | 1/2°             |
| 3232'            | 1/2°             |
| 3262'            | 1/2°             |
| 3291'            | 1°               |
| 3321'            | 1/2°             |
| 3352'            | 1/2°             |
| 3383'            | 1/2°             |
| 3414'            | 1/2°             |
| 3445'            | 1/2°             |
| 3477'            | 1/2°             |
| 3537'            | 1/2°             |
| 3568'            | 1/2°             |
| 3599'            | 1/2°             |
| 3629'            | 1/2°             |
| 3659'            | 1/2°             |
| 3665'            | 1/2°             |
| 3688'            | 1/2°             |
| 3718'            | 1/2°             |
| 3749'            | 1/2°             |
| 3809'            | 1/2°             |
| 3839'            | 1/2°             |
| 3869'            | 1/2°             |
| 3890'            | 3/4°             |
| TOTAL DEPTH      | 3890' K.B.       |

3. ENGINEERING SUMMARY

(f) Abandonment Plugs:

March 9, 1973 (Plug down at 8:30 A.M.)  
Plug #1: 3690-3890 (200') 90 sacks  
construction cement.

March 9, 1973 (Plug down at 9:15 A.M.)  
Plug #2: 3117-3432 (315') 160 sacks  
construction cement plus 2%  $\text{CaCl}_2$  cement.  
Felt plug at 5:15 P.M. (3070').

March 9, 1973 (Plug down at 7:00 P.M.)  
Plug #3: 433-533 (100') 70 sacks  
construction cement plus 2%  $\text{CaCl}_2$ . Felt  
plug at 3:00 A.M. March 10, 1973 at 410'  
K.B..

(g) Lost Circulation Zones:

None.

(h) Report of Blowouts:

None.

4. LOGGING SUMMARY

(a) Logs:

Dual Induction Laterolog - Run #1: 3890-485, run March 7, 1973.

Borehole Compensated Sonic Log - Run #1: 3890-485, run March 7, 1973.

Formation Density Log - Run #1: 3890-2400, run March 7, 1973.

(b) Surveys:

None.

5. ANALYSES

(a) Core Analysis:

None

(b) Gas Analysis:

None

(c) Oil Analysis:

None

5. ANALYSES(d) Water Analysis:

Lab #F73-252-3 - March 8, 1973  
3500'-3635' (DST #1)

Lab #F73-253-4 - March 9, 1973  
3170'-3240' (DST #2)

6. COMPLETION SUMMARY(a) Tubing Record:

None.

(b) Perforation Record:

None.

(c) Cementation Record:

See section 3(f) plus:

5 sacks construction cement at surface -  
cutoff casing 3' below ground level,  
welded on steel plate with riser and identifier.  
Plugged rat hole and mouse hole with cement.

(d) Acidization & Fracturing Record: None.(e) Back Pressure & Production Tests:

None.

7. DAILY DRILLING SUMMARY

| <u>Date</u> | <u>Depth</u> | <u>Footage</u> | <u>Remarks</u>                                                                                                                                                                                                                                                        |
|-------------|--------------|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Feb. 23/73  | 241          | 241            | Drilling.. Spud February 22, 1973 - 2:30 P.M.                                                                                                                                                                                                                         |
| Feb. 24     | 265          | 24             | Trying to plug washout in conductor pipe.                                                                                                                                                                                                                             |
| Feb. 25     | 431          | 166            | Rig to pump cellar.                                                                                                                                                                                                                                                   |
| Feb. 26     | 483          | 74             | Running 8 5/8" casing. While hoisting bit<br>four drill collars and bit dropped from table<br>to bottom. Ran in, screwed into fish - recovered<br>drill collars but left three cones in hole.<br>Reamed to 483'. Will fish cones after drilling<br>out of cement.     |
| Feb. 27     | 483          |                | Preparing to pressure test. Ran 12 joints<br>8 5/8". Set at 483' K.B. Cemented with 280<br>sacks construction cement plus 2% CaCl <sub>2</sub> . Cement<br>dropped 30' in annulus - re-cemented from<br>surface with 75 sacks construction and 4% CaCl <sub>2</sub> . |

7. DAILY DRILLING SUMMARY

| <u>Date</u> | <u>Depth</u> | <u>Footage</u> | <u>Remarks</u>                                                                                                                                                                                                                                                                                |
|-------------|--------------|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Feb. 28/73  | 537          | 32             | Drilling 7 7/8" hole.                                                                                                                                                                                                                                                                         |
| Mar. 1      | 1266         | 729            | Drilling.                                                                                                                                                                                                                                                                                     |
| Mar. 2      | 2048         | 782            | Drilling..                                                                                                                                                                                                                                                                                    |
| Mar. 3      | 2683         | 635            | Drilling..                                                                                                                                                                                                                                                                                    |
| Mar. 4      | 3232         | 549            | Drilling..                                                                                                                                                                                                                                                                                    |
| Mar. 5      | 3665         | 433            | Hoisting bit #4.                                                                                                                                                                                                                                                                              |
| Mar. 6      | 3890         | 225            | Hoist for dummy trip prior to logging.                                                                                                                                                                                                                                                        |
|             | T.D.         |                |                                                                                                                                                                                                                                                                                               |
| Mar. 7      |              |                | Logging:                                                                                                                                                                                                                                                                                      |
| Mar. 8      |              |                | Testing: DST #1: 3500-3635 (Keg River)<br>5/60/90/90, FAB on PF, FAB on VO - steady<br>throughout. Recovered 500' mud cut sulphurous<br>salt water, 2490' sulphurous salt water<br>(46,400 ppm NaCl). HP 1829-1805, FP 292/1451,<br>SIP 1561-1561 (levelled). BHT 107° F.                     |
| Mar. 9      |              |                | Waiting on cement truck. DST #2: 3170-3240<br>(Slave Point) 5/60/60/60 WAB on PF, WAB on<br>VO decreasing slightly to end of VO. Recovered<br>60' black sulphurous muddy salt water, 580'<br>salt water (salinity 80,400 ppm NaCl).<br>HP 1703-1678, FP 61-268, SIP 1378-1378.<br>BHT 101° F. |
| Mar. 10     |              |                | ABANDONED. Plug #1: 3690-3890 C-90.<br>Plug #2: 3117-3432 C-160. Felt at 3070'.<br>Plug #3: 433-533 C-70. Felt at 410'.<br>Rig released 8:00 A.M. March 10, 1973.                                                                                                                             |

# CHEMICAL & GEOLOGICAL LABORATORIES LTD.

WATER ANALYSIS

Lab No. F73-252-3

Received: Mar. 14, 1973 Reported: Mar. 19, 1973 Well: Location: Pacific HB Alexandra 0-54 60°23' 48"N 117°55' 10"W

Operator: PACIFIC PETROLEUMS LTD.

Field or Area: Wildcat

Elev.: K.B. 982' Grd.

Zone/Formation: Keg River

Sample Interval: 3500' - 3635'

Method of Production: D.S.T. #1

Sampled from: 1500'

Sampled by: Lynes United Services Ltd.

Date: Mar. 7, 1973

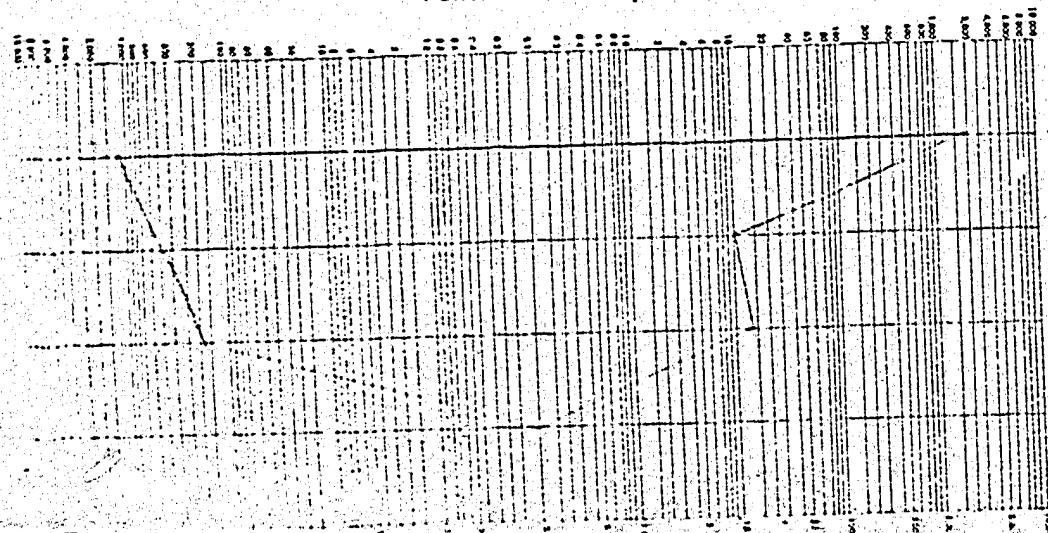
OTHER PERTINENT DATA Recovered 2990'.

(Signed)

|    | Na & K  | K | Ca     | Mg     |  |  |  | SO <sub>4</sub> | Cl      |  |  | CO <sub>3</sub> | HCO <sub>3</sub> | OH |  |
|----|---------|---|--------|--------|--|--|--|-----------------|---------|--|--|-----------------|------------------|----|--|
| /L | 23,629  |   | 9,051  | 2,284  |  |  |  | 634             | 66,000  |  |  | 0               | 630              | 0  |  |
| /L | 1245.34 |   | 451.64 | 137.74 |  |  |  | 13.19           | 1861.20 |  |  | —               | 10.33            | —  |  |
| %  | 33.04   |   | 11.98  | 4.98   |  |  |  | 0.35            | 49.38   |  |  | —               | 0.27             | —  |  |

Total Solids Mg/L: By Evaporation 130,360 Fe Trace Specific Gravity 1.074 @60°F Observed pH 6.7 @ 72 °F  
 Calculated 107,228 After Ignition 100,020 H<sub>2</sub>S Present Refractive Index 1.3524 @25°C Resistivity 0.083 ohm meters @ 68 °F

Pattern Unit Meq./L



Remarks and Conclusions

Sample consisted of pale green colored water with a trace of black sediment.

Continued.....

## CHEMICAL &amp; GEOLOGICAL LABORATORIES LIMITED

OPERATOR: PACIFIC PETROLEUMS LTD.

REPORT NUMBER: F73-252

KIND OF SAMPLE: Water

DATE SAMPLED: March 7, 1973

DATE RECEIVED: March 14, 1973

DATE REPORTED: March 19, 1973

| <u>LABORATORY<br/>NUMBER</u> | <u>SAMPLED FROM</u> | <u>RESISTIVITY<br/>(OHM-Meters @ 68°F.)</u> | <u>CHLORIDE CONTENT<br/>(Me/l)</u> | <u>REMARKS</u>                                                                                               |
|------------------------------|---------------------|---------------------------------------------|------------------------------------|--------------------------------------------------------------------------------------------------------------|
| F73-252-1                    | 2960 Feet           | 0.188                                       | 26,000                             | Sample consisted of approximately 60% yellow colored water and 40% sediment.                                 |
| F73-252-2                    | 2400 Feet           | 0.159                                       | 30,000                             | Sample consisted of approximately 70% yellow colored water and 30% sediment.                                 |
| F73-252-4                    | Top of Tool         | 0.083                                       | 66,000                             | Analysis determined on pale green colored water filtered from mud. Insufficient sample for further analysis. |

Received: Mar. 14, 1973 Reported: Mar. 19, 1973

Well: Location: Pacific HB Alexandra 0-54 60° 23' 48" N 117° 55' 10" W

Operator: PACIFIC PETROLEUMS LTD.

Field or Area: Wildcat

Elev.: K.B. 982' Grd.

Zone/Formation: Slave Point

Sample Interval: 3170' - 3240'

Method of Production: D.S.T. #2

Sampled from: Top of Tool

Sampled by: Lynes United Services Ltd. Date: Mar. 8, 1973

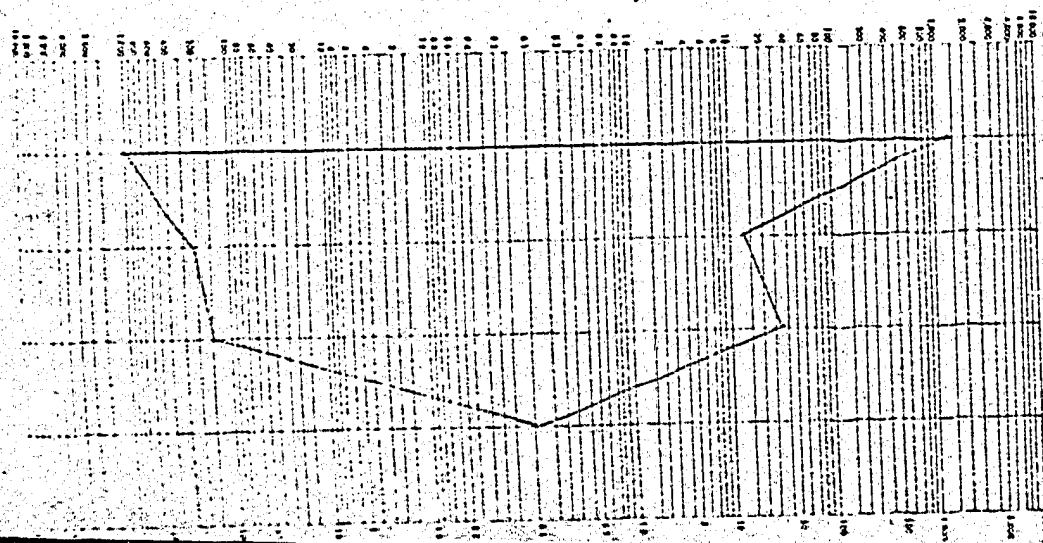
OTHER PERTINENT DATA Recovered 640 ft.

(Signed)

| Na & K  | K | Ca     | Mg     |  |  |  |  | SO <sub>4</sub> | Cl      |  |  | CO <sub>3</sub> | HCO <sub>3</sub> | OH |  |
|---------|---|--------|--------|--|--|--|--|-----------------|---------|--|--|-----------------|------------------|----|--|
| 24,559  |   | 4,726  | 1,871  |  |  |  |  | 1,666           | 50,000  |  |  | 0               | 810              | 0  |  |
| 1068.30 |   | 235.83 | 153.80 |  |  |  |  | 34.65           | 1410.00 |  |  | —               | 13.28            | —  |  |
| 36.64   |   | 8.09   | 5.27   |  |  |  |  | 1.19            | 48.36   |  |  | —               | 0.45             | —  |  |

Total Solids Mg/L: By Evaporation 99,160 Fe Trace Specific Gravity 1.060 @ 60°F Observed pH 6.9 @ 72°F  
 Calculated 83,632 After Ignition 77,110 H<sub>2</sub>S Present Refractive Index 1.3478 @ 25°C Resistivity 0.103 ohm meters @ 68°F

Pattern Unit Meq./L



Remarks and Conclusions

Sample consisted of approximately 75% pale green colored water and 25% sediment.

Continued....

## CHEMICAL &amp; GEOLOGICAL LABORATORIES LIMITED

OPERATOR: PACIFIC PETROLEUMS LTD.

REPORT NUMBER: F73-253

KIND OF SAMPLE: Water

DATE SAMPLED: March 8, 1973

DATE RECEIVED: March 14, 1973

DATE REPORTED: March 19, 1973

| <u>LABORATORY<br/>NUMBER</u> | <u>SAMPLED FROM</u> | <u>RESISTIVITY<br/>(OHM-Meters @ 68°F.)</u> | <u>CHLORIDE CONTENT<br/>(Mg/l)</u> | <u>REMARKS</u>                                                                         |
|------------------------------|---------------------|---------------------------------------------|------------------------------------|----------------------------------------------------------------------------------------|
| F73-253-1                    | 600 Feet            | 0.156                                       | 31,000                             | Sample consisted of approximately 70%<br>pale green colored water and 30%<br>sediment. |
| F73-253-2                    | 300 Feet            | 0.105                                       | 48,500                             | Sample consisted of pale green colored<br>water with a trace of black sediment.        |
| F73-253-3                    | 60 Feet             | 0.104                                       | 49,000                             | Sample consisted of pale green colored<br>water with a trace of black sediment.        |

# CHEMICAL & GEOLOGICAL LABORATORIES LTD.

## WATER ANALYSIS

Lab No. F73-252-3

Received: Mar. 14, 1973 Reported: Mar. 19, 1973

Well: Location: Pacific HB Alexandra 0-54 60°23' 48"N 117°55' 10"W

Operator: PACIFIC PETROLEUMS LTD.

Field or Area: Wildcat

Elev.: K.B. 982' Grd.

Zone/Formation: Keg River

Sample Interval: 3500' - 3635'

Method of Production: D.S.T. #1

Sampled from: 1500'

Sampled by: Lynes United Services Ltd.

Date: Mar. 7, 1973

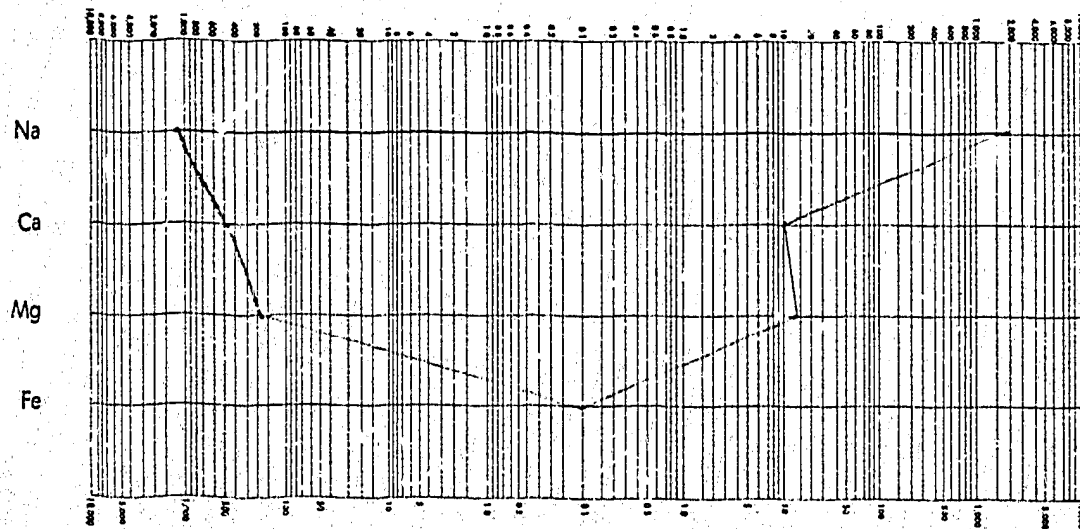
OTHER PERTINENT DATA Recovered 2990'.

(Signed)

|        | Na & K  | K | Ca     | Mg     |  |  |  | SO <sub>4</sub> | Cl      |  |  | CO <sub>3</sub> | HCO <sub>3</sub> | OH |  |
|--------|---------|---|--------|--------|--|--|--|-----------------|---------|--|--|-----------------|------------------|----|--|
| Mg./L  | 28,629  |   | 9,051  | 2,284  |  |  |  | 634             | 66,000  |  |  | 0               | 630              | 0  |  |
| Meq./L | 1245.34 |   | 451.64 | 187.74 |  |  |  | 13.19           | 1861.20 |  |  | —               | 10.33            | —  |  |
| Meq. % | 33.04   |   | 11.98  | 4.98   |  |  |  | 0.35            | 49.38   |  |  | —               | 0.27             | —  |  |

Total Solids Mg/L: By Evaporation 130,360 Fe Trace Specific Gravity 1.074 @60°F Observed pH 6.7 @ 72 °F  
 Calculated 107,228 After Ignition 100,020 H<sub>2</sub>S Present Refractive Index 1.3524 @25°C Resistivity 0.083 ohm meters @ 68 °F

Pattern Unit Meq./L



### Remarks and Conclusions

Sample consisted of pale green colored water with a trace of black sediment.



Continued.....

## CHEMICAL &amp; GEOLOGICAL LABORATORIES LIMITED

OPERATOR: PACIFIC PETROLEUMS LTD.

REPORT NUMBER: F73-252

KIND OF SAMPLE: Water

DATE SAMPLED: March 7, 1973

DATE RECEIVED: March 14, 1973

DATE REPORTED: March 19, 1973

| <u>LABORATORY<br/>NUMBER</u> | <u>SAMPLED FROM</u> | <u>RESISTIVITY<br/>(OHM-Meters @ 68°F.)</u> | <u>CHLORIDE CONTENT<br/>(Mg/l)</u> | <u>REMARKS</u>                                                                                               |
|------------------------------|---------------------|---------------------------------------------|------------------------------------|--------------------------------------------------------------------------------------------------------------|
| F73-252-1                    | 2960 Feet           | 0.188                                       | 26,000                             | Sample consisted of approximately 60% yellow colored water and 40% sediment.                                 |
| F73-252-2                    | 2400 Feet           | 0.159                                       | 30,000                             | Sample consisted of approximately 70% yellow colored water and 30% sediment.                                 |
| F73-252-4                    | Top of Tool         | 0.083                                       | 66,000                             | Analysis determined on pale green colored water filtered from mud. Insufficient sample for further analysis. |

DA 654

## CHEMICAL &amp; GEOLOGICAL LABORATORIES LTD.

## WATER ANALYSIS

Lab No. F73-253-4

Received: Mar. 14, 1973 Reported: Mar. 19, 1973

Well: Location: Pacific HB Alexandra 0-54 60° 23' 48" N 117° 55' 10" W

Operator: PACIFIC PETROLEUMS LTD.

Field or Area: Wildcat

Elev.: K.B. 982' Grd.

Zone/Formation: Slave Point

Sample Interval: 3170' - 3240'

Method of Production: D.S.T. #2

Sampled from: Top of Tool

Sampled by: Lynes United Date: Mar. 8, 1973  
Services Ltd.

OTHER PERTINENT DATA Recovered 640 ft.

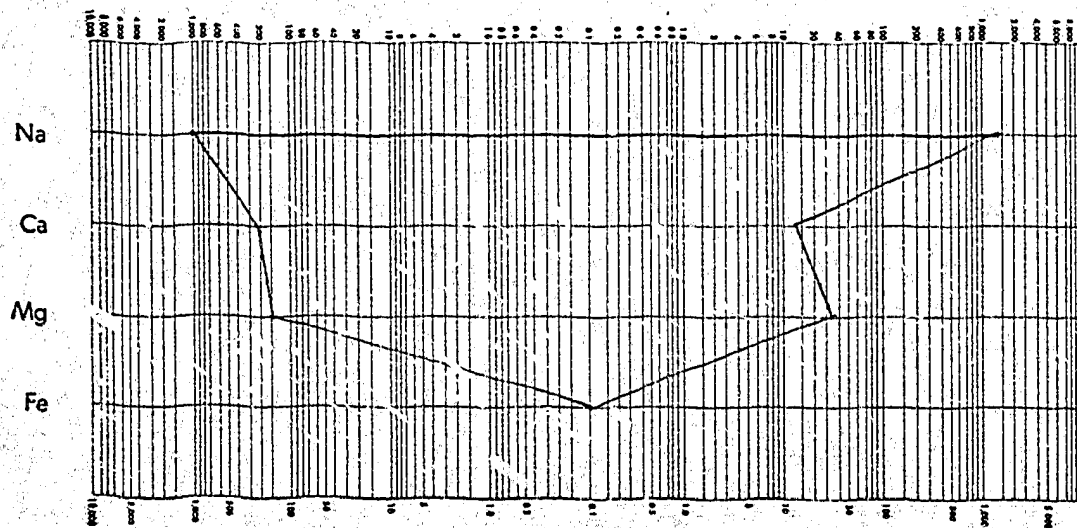
(Signed)

|        | Na & K  | K | Ca     | Mg     |  |  |  |  | SO <sub>4</sub> | Cl      |  |  | CO <sub>3</sub> | HCO <sub>3</sub> | OH |  |
|--------|---------|---|--------|--------|--|--|--|--|-----------------|---------|--|--|-----------------|------------------|----|--|
| Mg./L  | 24,559  |   | 4,726  | 1,871  |  |  |  |  | 1,666           | 50,000  |  |  | 0               | 810              | 0  |  |
| Meq./L | 1068.30 |   | 235.83 | 153.80 |  |  |  |  | 34.65           | 1410.00 |  |  | —               | 13.28            | —  |  |
| Meq. % | 36.64   |   | 8.09   | 5.27   |  |  |  |  | 1.19            | 48.36   |  |  | —               | 0.45             | —  |  |

Total Solids Mg/L: By Evaporation 99,160 Fe Trace Specific Gravity 1.060 @ 60°F Observed pH 6.9 @ 72 °F

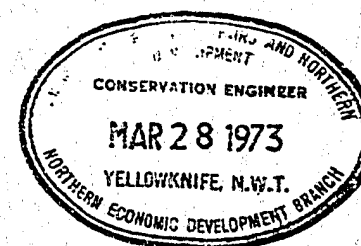
Calculated 83,632 After Ignition 77,110 H<sub>2</sub>S Present Refractive Index 1.3478 @ 25°C Resistivity 0.103 ohm meters @ 68 °F

Pattern Unit Meq./L



## Remarks and Conclusions

Sample consisted of approximately 75% pale green colored water and 25% sediment.



Continued....

## CHEMICAL &amp; GEOLOGICAL LABORATORIES LIMITED

OPERATOR: PACIFIC PETROLEUMS LTD.

REPORT NUMBER: F73-253

KIND OF SAMPLE: Water

DATE SAMPLED: March 8, 1973

DATE RECEIVED: March 14, 1973

DATE REPORTED: March 19, 1973

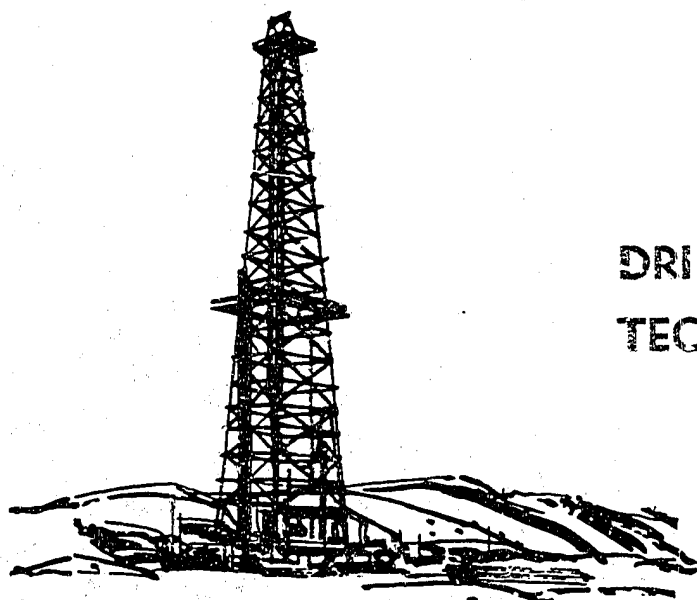
| <u>LABORATORY<br/>NUMBER</u> | <u>SAMPLED FROM</u> | <u>RESISTIVITY<br/>(OHM-Meters @ 68°F.)</u> | <u>CHLORIDE CONTENT<br/>(Mg/l)</u> | <u>REMARKS</u>                                                                         |
|------------------------------|---------------------|---------------------------------------------|------------------------------------|----------------------------------------------------------------------------------------|
| F73-253-1                    | 600 Feet            | 0.156                                       | 31,000                             | Sample consisted of approximately 70%<br>pale green colored water and 30%<br>sediment. |
| F73-253-2                    | 300 Feet            | 0.105                                       | 48,500                             | Sample consisted of pale green colored<br>water with a trace of black sediment.        |
| F73-253-3                    | 60 Feet             | 0.104                                       | 49,000                             | Sample consisted of pale green colored<br>water with a trace of black sediment.        |



**LYNES**

*BRIGHT NAME IN THE OIL PATCH*

*Inflatable and Conventional Packer Tools*



**DRILL STEM TEST  
TECHNICAL SERVICE REPORT**

# NOMENCLATURE (Definition of Symbols)

|                   |                                                                                  |
|-------------------|----------------------------------------------------------------------------------|
| Q                 | = average production rate during test, bbl./day                                  |
| Q <sub>g</sub>    | = measured gas production rate during test, MCF/day                              |
| k                 | = permeability, md                                                               |
| h                 | = net pay thickness, ft. (when unknown, test interval is chosen)                 |
| μ                 | = fluid viscosity, centipoise                                                    |
| Z                 | = compressibility factor                                                         |
| T <sub>r</sub>    | = reservoir temperature, ° Rankine                                               |
| m                 | = slope of final SIP buildup plot, psig/cycle (psig <sup>2</sup> -cycle for gas) |
| b                 | = approximate radius of investigation, feet                                      |
| r <sub>w</sub>    | = wellbore radius, feet                                                          |
| t <sub>0</sub>    | = total flowing time, minutes                                                    |
| P <sub>0</sub>    | = Extrapolated maximum reservoir pressure, psig                                  |
| P <sub>f</sub>    | = final flowing pressure, psig                                                   |
| P.I.              | = productivity index, bbl./day/psi                                               |
| P.I. <sub>1</sub> | = theoretical productivity index with damage removed, bbl./day/psi               |
| D.R.              | = damage ratio                                                                   |
| E.D.R.            | = estimated damage ratio                                                         |
| AOF               | = absolute open flow potential, MCF/D                                            |
| AOF <sub>1</sub>  | = theoretical absolute open flow if damage were removed                          |
| z                 | = subsea depth                                                                   |
| W                 | = water gradient based on salinity                                               |
| H <sub>0</sub>    | = potentiometric surface                                                         |

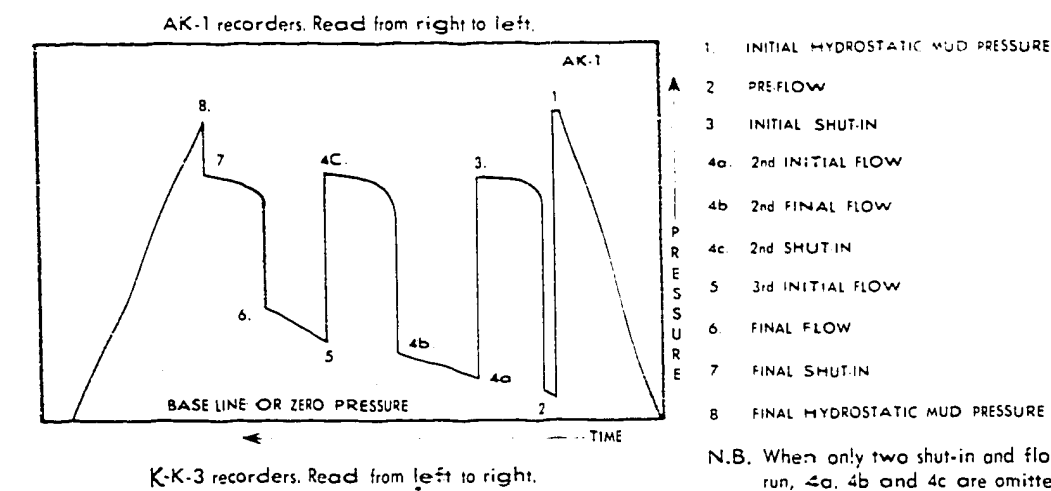
| INTERPRETATION CALCULATIONS (OIL/WATER)                                                                                                                                                                                                                                                                                                                                                                     |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <b>AVERAGE PRODUCTION RATE DURING TEST</b><br>$Q = \frac{1440 \text{ (drill collar capacity + recovery - drill pipe capacity + recovery)}}{\text{initial flow time} + \text{final flow time}}$ $= 1440 \left[ \frac{1}{\text{initial flow time}} + \frac{1}{\text{final flow time}} \right]$<br>$= 1440 \left[ \frac{1}{0.145 \text{ or } 0.073} \right] \left[ \frac{\text{ft.}}{\text{bbl./day}} \right]$ |  |
| <b>FLUID PROPERTIES</b><br>API Gravity @ 60° F.      ° Specific Gravity @ 60° F.      Est. Viscosity      cp<br>Estimated Bottom Hole Temperature      °                                                                                                                                                                                                                                                    |  |
| <b>TRANSMISSIBILITY</b><br>$kh = \frac{162.6 Q}{m} = \frac{162.6}{m} \left[ \frac{\text{md-ft}}{\text{cp}} \right]$                                                                                                                                                                                                                                                                                         |  |
| <b>IN SITU CAPACITY</b><br>$kh = \left[ \frac{\text{md-ft}}{\text{cp}} \right]$                                                                                                                                                                                                                                                                                                                             |  |
| <b>AVERAGE EFFECTIVE PERMEABILITY</b><br>$k = \left[ \frac{\text{md}}{\text{ft.}} \right]$                                                                                                                                                                                                                                                                                                                  |  |
| <b>PRODUCTIVITY INDEX</b><br>$PI = \frac{Q}{P_0 - P_f} = \left[ \frac{\text{bbl./day-psi}}{\text{ft.}} \right]$                                                                                                                                                                                                                                                                                             |  |
| <b>DAMAGE RATIO</b><br>$D.R. = \frac{0.183 (P_0 - P_f)}{m} = 0.183 \left[ \frac{\text{ft.}}{\text{ft.}} \right]$                                                                                                                                                                                                                                                                                            |  |
| <b>PRODUCTIVITY INDEX WITH DAMAGE REMOVED</b><br>$P.I._1 = P.I. \times D.R. = \left[ \frac{\text{bbl./day-psi}}{\text{ft.}} \right]$                                                                                                                                                                                                                                                                        |  |
| <b>APPROXIMATE RADIUS OF INVESTIGATION</b><br>$b = \sqrt{\frac{kh}{\pi}} = \sqrt{\left[ \frac{\text{md-ft}}{\text{cp}} \right]} = \text{ft.}$                                                                                                                                                                                                                                                               |  |
| <b>Drawdown Factor</b> = $\frac{1.51 P_0 - F.S.I.P. + 100}{1.51 P_0} \times 100 = \frac{\%}{\text{ft.}}$ (4% to 5% is considered serious or substantial)                                                                                                                                                                                                                                                    |  |
| <b>Potentiometric Surface</b> = $H_0 = Z + \frac{P_0}{W}$ ft.                                                                                                                                                                                                                                                                                                                                               |  |

| INTERPRETATION CALCULATIONS (GAS)                                                                                                                                                                                                         |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <b>ESTIMATED GAS PROPERTIES</b><br>Gravity @ 60° F.      Viscosity (Ret.)      cp      Estimated Bottom Hole Temperature      °<br>Compressibility Factor (Z)                                                                             |  |
| <b>TRANSMISSIBILITY</b><br>$kh = \frac{162.6 Q_g Z T_r}{m} = \frac{162.6}{m} \left[ \frac{\text{md-ft}}{\text{cp}} \right]$                                                                                                               |  |
| <b>IN SITU CAPACITY</b><br>$kh = \left[ \frac{\text{md-ft}}{\text{cp}} \right]$                                                                                                                                                           |  |
| <b>AVERAGE EFFECTIVE PERMEABILITY</b><br>$k = \left[ \frac{\text{md}}{\text{ft.}} \right]$                                                                                                                                                |  |
| <b>APPROXIMATE RADIUS OF INVESTIGATION</b><br>$b = 0.02 \sqrt{\frac{kh}{\pi}} = 0.02 \sqrt{\left[ \frac{\text{md-ft}}{\text{cp}} \right]} = \text{ft.}$                                                                                   |  |
| <b>ACTUAL CAPACITY</b><br>$kh = \frac{3270 Q_g Z T_r \log \left( \frac{0.472 b}{r_w} \right)}{P_0^2 - P_f^2} = 3270 \left[ \frac{\text{md-ft}}{\text{cp}} \right]$                                                                        |  |
| <b>DAMAGE RATIO</b><br>$D.R. = \frac{\text{In Situ Capacity}}{\text{Actual Capacity}} = \left[ \frac{\text{md-ft}}{\text{md-ft}} \right]$                                                                                                 |  |
| <b>ESTIMATED RANGE OF AOF POTENTIAL</b><br>Max. AOF = $\frac{Q_g P_0^2}{P_0^2 - P_f^2} = \left[ \frac{\text{MCF/D}}{\text{ft.}} \right]$<br>Min. AOF = $\frac{Q_g P_f^2}{P_0^2 - P_f^2} = \left[ \frac{\text{MCF/D}}{\text{ft.}} \right]$ |  |
| <b>ESTIMATED RANGE OF AOF POTENTIAL DAMAGE REMOVED</b><br>Max. AOF <sub>1</sub> = [Max. AOF] (D.R.) =      MCF/D<br>Min. AOF <sub>1</sub> = [Min. AOF] (D.R.) =      MCF/D                                                                |  |
| <b>Drawdown Factor</b> = $\frac{1.51 P_0 - F.S.I.P. + 100}{1.51 P_0} \times 100 = \frac{\%}{\text{ft.}}$ (4% to 5% is considered serious or substantial)                                                                                  |  |
| <b>Potentiometric Surface</b> = $H_0 = Z + \frac{P_0}{W}$ ft.                                                                                                                                                                             |  |

## PRESSURE CHARTS

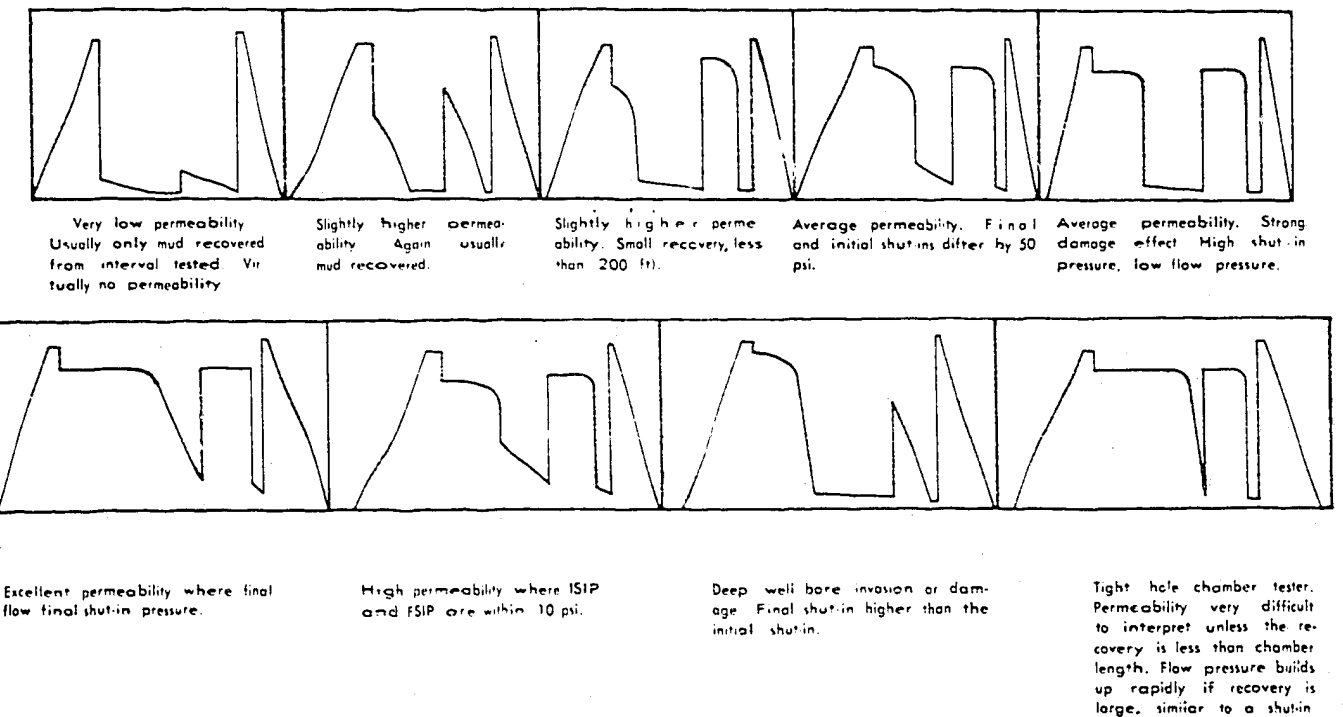
### GUIDE TO INTERPRETATION AND IDENTIFICATION OF LYNES DRILL STEM TEST PRESSURE CHARTS

In making any interpretation, our employees will give Customer the benefit of their best judgment as to the correct interpretation. Nevertheless, since all interpretations are opinions based on inferences from electrical, mechanical or other measurements, we cannot, and do not, guarantee the accuracy or correctness of any interpretations, and we shall not be liable or responsible, except in the case of gross or wilful negligence on our part, for any loss, costs, damages or expenses incurred or sustained by Customer resulting from any interpretation made by any of our agents or employees.



K-K-3 recorders. Read from left to right.

Typical charts for visual field analysis ranging from very low to high permeability.



# LYNES UNITED SERVICES LTD.

| TEST DATA                                                                                    |               |                          |                | GENERAL INFORMATION                                                        |                              |                  |  |
|----------------------------------------------------------------------------------------------|---------------|--------------------------|----------------|----------------------------------------------------------------------------|------------------------------|------------------|--|
| Test No. One                                                                                 |               | Lynes Test One           |                | Company Pacific Petroleum Ltd.                                             |                              |                  |  |
| Formation Keg River                                                                          |               | T.D. 3890                |                | Address 700 - 6th Avenue S.W.                                              |                              |                  |  |
| Interval Tested 3500                                                                         |               | Ft. to 3635              |                | Calgary, Alberta                                                           |                              |                  |  |
| Interval Tested 135                                                                          |               | Ft. Net Pay Tested       |                |                                                                            |                              |                  |  |
| Type of Test Inflate Straddle                                                                |               |                          |                | Well Name Pacific HB Alexandra                                             |                              |                  |  |
| Cushion -                                                                                    |               | Amount -                 |                | Well Number 0-54                                                           |                              |                  |  |
| Started in Hole at 19:00                                                                     |               | Hrs. Tool Open at 21:35  |                | K.B. Elevation 982 Sub-Sea Elevation                                       |                              |                  |  |
| Pre-Flow 5                                                                                   |               | Mins. Initial Shut-in 60 |                | Area Wildcat Province N.W.T.                                               |                              |                  |  |
| 2nd Flow                                                                                     |               | Mins. Second Shut-in     |                | Company Rep. Bob Linton                                                    |                              |                  |  |
| Final Flow 90                                                                                |               | Mins. Final Shut-in 90   |                | Tester Tom Armagost                                                        |                              |                  |  |
| Remarks:                                                                                     |               |                          |                | Contractor Kenting Ria No. 9                                               |                              |                  |  |
| Blow: Fair air blow on pre-flow. Fair air blow on final flow, steady throughout flow period. |               |                          |                | Ticket No. 5798 Date March 7, 1973                                         |                              |                  |  |
|                                                                                              |               |                          |                | Service Reports To: 8 - above address                                      |                              |                  |  |
| GAS BLOW MEASUREMENTS                                                                        |               |                          |                | MUD AND HOLE DATA                                                          |                              |                  |  |
| Measured with                                                                                |               |                          |                | Mud Type Gel - Chemical                                                    |                              |                  |  |
| Time                                                                                         | Surface Choke | Reading Inches           | Cubic Feet/Day | Weight 9.2                                                                 | Viscosity 45                 | Water Loss 16.00 |  |
|                                                                                              |               |                          |                | Filter Coke 2/32                                                           | Bottom Hole Temperature 107° |                  |  |
|                                                                                              |               |                          |                | Drill Pipe Size 4½ FH                                                      | Weight 16.60                 |                  |  |
|                                                                                              |               |                          |                | Drill Collars 4½ H-90                                                      | I.D. 2 7/8 Feet Run 170      |                  |  |
|                                                                                              |               |                          |                | Main Hole or Casing Size 7 7/8                                             |                              |                  |  |
|                                                                                              |               |                          |                | Rathole or Liner Size -                                                    | No. of Feet -                |                  |  |
|                                                                                              |               |                          |                | Bottom Hole Choke Size 1"                                                  |                              |                  |  |
|                                                                                              |               |                          |                | Surface Choke Size 1"                                                      |                              |                  |  |
|                                                                                              |               |                          |                | Packer Rubber Size 6 x 7 x 72 Inflate                                      |                              |                  |  |
|                                                                                              |               |                          |                | REMARKS                                                                    |                              |                  |  |
|                                                                                              |               |                          |                | Shut-in pressures suggest average permeability within the interval tested. |                              |                  |  |
| RECOVERY                                                                                     |               |                          |                |                                                                            |                              |                  |  |
| TOTAL FLUID RECOVERED 2990                                                                   |               |                          |                | Ft. Consisting of:                                                         |                              |                  |  |
| 500 Ft. of Muddy sulphurous salt water.                                                      |               |                          |                |                                                                            |                              |                  |  |
| 2490 Ft. of Salt water.                                                                      |               |                          |                |                                                                            |                              |                  |  |
| Ft. of                                                                                       |               |                          |                |                                                                            |                              |                  |  |
| Ft. of                                                                                       |               |                          |                |                                                                            |                              |                  |  |
| Test was/was not Reverse Circulated was not                                                  |               |                          |                |                                                                            |                              |                  |  |
| Oil Recovery A.P.I.                                                                          |               |                          |                | Water Specific Gravity                                                     |                              |                  |  |
| Salinity 46,400 PPM salt                                                                     |               |                          |                |                                                                            |                              |                  |  |
| PRESSURE READINGS                                                                            |               |                          |                |                                                                            |                              |                  |  |
| Inside Outside X                                                                             |               | Inside Outside X         |                | Inside Outside X                                                           |                              | Inside Outside   |  |
| Recorder No. 8885                                                                            |               | Recorder No. 2891        |                | Recorder No. 7586                                                          |                              | Recorder No.     |  |
| Capacity 2900                                                                                |               | Capacity 3000            |                | Capacity 65 - 271                                                          |                              | Capacity         |  |
| Depth 3504                                                                                   |               | Depth 3504               |                | Depth 3504                                                                 |                              | Depth            |  |
| NUMBER KEY:                                                                                  |               |                          |                |                                                                            |                              |                  |  |
| 1 - INITIAL HYDROSTATIC                                                                      |               | 1783                     |                | 1770                                                                       |                              |                  |  |
| 2 - PRE-FLOW                                                                                 |               | 319                      |                | 320                                                                        |                              | 105              |  |
| 3 - INITIAL SHUT-IN                                                                          |               | 1557                     |                | 1549                                                                       |                              |                  |  |
| 4a - 2nd INITIAL FLOW                                                                        |               |                          |                |                                                                            |                              |                  |  |
| 4b - 2nd FINAL FLOW                                                                          |               |                          |                |                                                                            |                              |                  |  |
| 4c - 2nd SHUT-IN                                                                             |               |                          |                |                                                                            |                              |                  |  |
| 5 - 3rd INITIAL FLOW                                                                         |               | 302                      |                | 299                                                                        |                              |                  |  |
| 6 - FINAL FLOW                                                                               |               | 1328                     |                | 1440                                                                       |                              |                  |  |
| 7 - FINAL SHUT-IN                                                                            |               | 1557                     |                | 1549                                                                       |                              |                  |  |
| 8 - FINAL HYDROSTATIC                                                                        |               | 1772                     |                | 1770                                                                       |                              |                  |  |

Pacific Petroleum Ltd.  
Company  
Pacific HB Alexandra 0-54  
Well Name and Description  
DH 654  
One  
March 7, 1973  
Date of Test

# LYNES UNITED SERVICES LTD.

WELL NAME - PACIFIC RD ALEXANDRA

LOCATION - 0-54

DST NUMBER - 1

INTERVAL TESTED - 3500 TO 3635

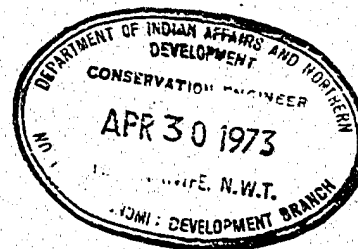
RECORDED NO. - 8885

DEPTH - 3504

## INITIAL SHUT IN PRESSURE

| TIME(MIN)<br>$\Phi$ | $\frac{T + \Phi}{\Phi}$ | PSIG |
|---------------------|-------------------------|------|
| 0                   | 0.0000                  | 1511 |
| 5                   | 2.0000                  | 1530 |
| 10                  | 1.5000                  | 1545 |
| 15                  | 1.3333                  | 1551 |
| 20                  | 1.2500                  | 1554 |
| 25                  | 1.2000                  | 1555 |
| 30                  | 1.1667                  | 1556 |
| 35                  | 1.1429                  | 1556 |
| 40                  | 1.1250                  | 1556 |
| 45                  | 1.1111                  | 1557 |
| 50                  | 1.1000                  | 1557 |
| 55                  | 1.0909                  | 1557 |
| 60                  | 1.0833                  | 1557 |

EXTRAPOLATION OF INITIAL SHUT-IN = 1559.60



# LYNES UNITED SERVICES LTD.

WELL NAME - PACIFIC 113 ALEXANDRA

LOCATION - 0-54

DST NUMBER - 1

INTERVAL TESTED - 3500 TO 3635

RECORDER NO. - 8665

DEPTH - 3504

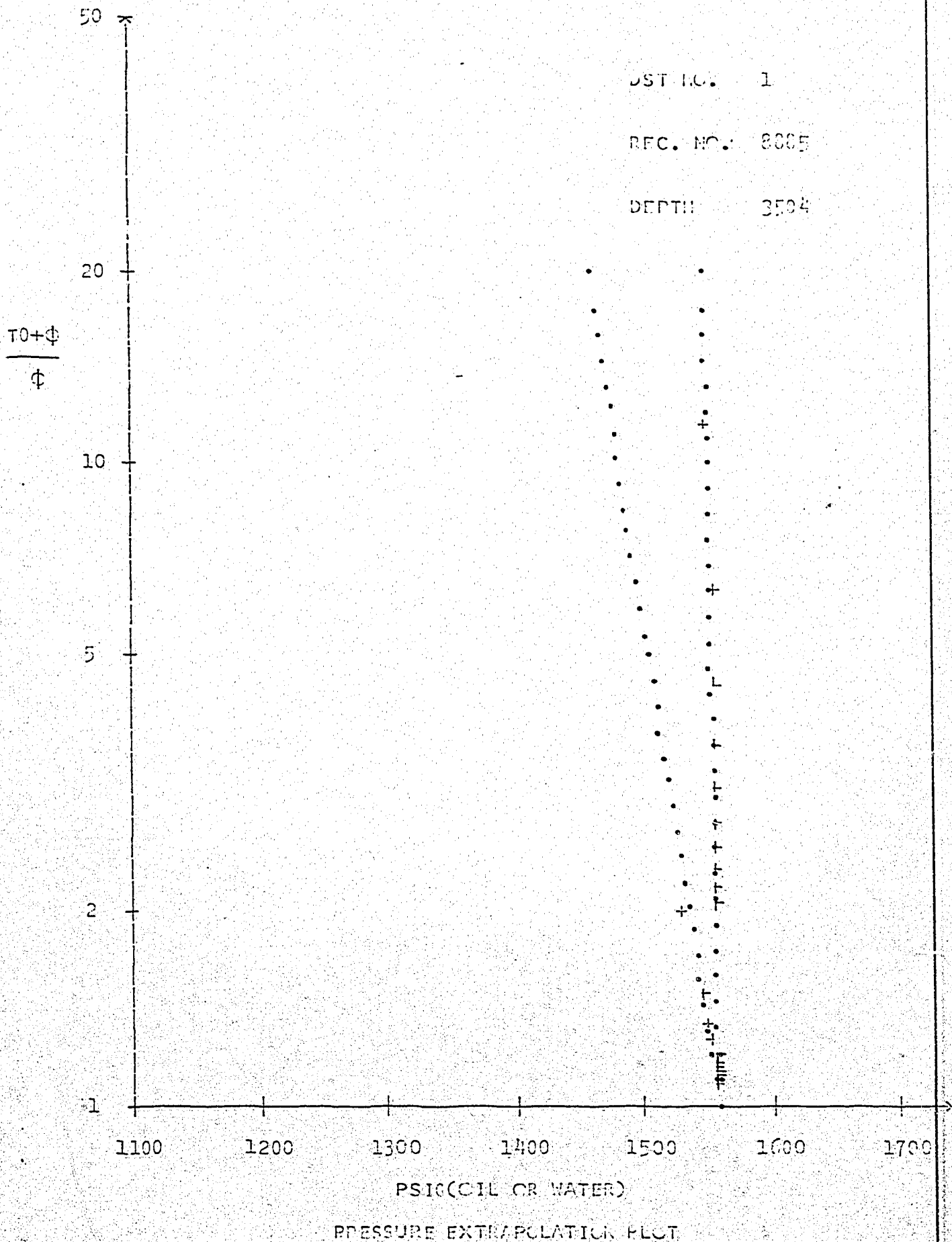
## SECOND SHUT IN PRESSURE

| TIME(MIN.)<br>0 | $\frac{T + Q}{Q}$ | PSIG |
|-----------------|-------------------|------|
| 0               | 0.0000            | 1328 |
| 9               | 11.5156           | 1551 |
| 16              | 6.2778            | 1550 |
| 27              | 4.5181            | 1550 |
| 36              | 3.6320            | 1556 |
| 45              | 3.1111            | 1556 |
| 54              | 2.7503            | 1556 |
| 63              | 2.5070            | 1556 |
| 72              | 2.3164            | 1556 |
| 81              | 2.1728            | 1556 |
| 90              | 2.0556            | 1557 |

EQU. FITTED LINE IS  $\log((TC+Q)/Q) = -0.15156 \text{ PSIG} + 231.23540$

EXTRAPOLATION OF SECOND SHUT-IN = 1550.0 PSIG

# LYNES UNITED SERVICES LTD.



Pacific Petroleum Ltd.  
Company

Pacific HB Alexandria 0-54  
Well Name and Description

DA 654

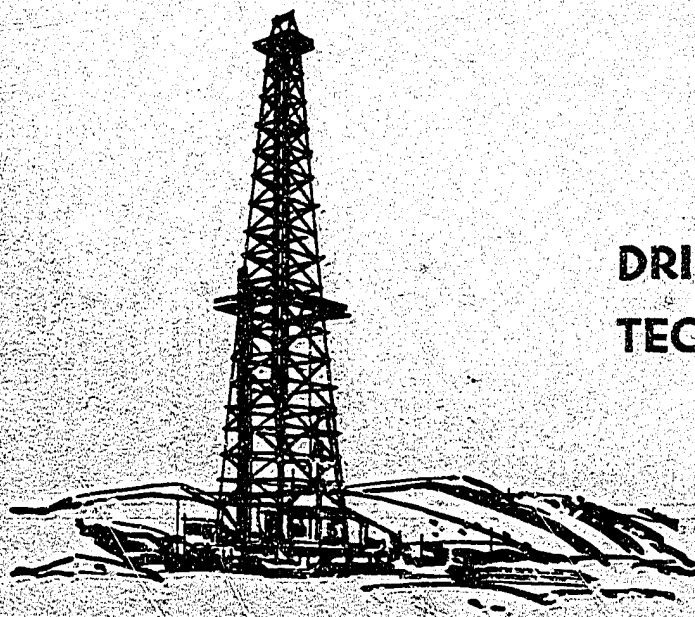
Two  
Toll No.

March 8, 1973  
Date of Test

**LYNES**

*BRIGHT NAME IN THE OIL PATCH*

*Inflatable and Conventional Packer Tools*



## DRILL STEM TEST TECHNICAL SERVICE REPORT

# NOMENCLATURE (Definition of Symbols)

|                   |                                                                                  |
|-------------------|----------------------------------------------------------------------------------|
| Q                 | = average production rate during test, bbl./day                                  |
| Q <sub>g</sub>    | = measured gas production rate during test, MCF/day                              |
| k                 | = permeability, md                                                               |
| h                 | = net pay thickness, ft. (when unknown, test interval is chosen)                 |
| μ                 | = fluid viscosity, centipoise                                                    |
| Z                 | = compressibility factor                                                         |
| T <sub>r</sub>    | = reservoir temperature, ° Rankine                                               |
| m                 | = slope of final SIP buildup plot, psig/cycle (psig <sup>2</sup> /cycle for gas) |
| b                 | = approximate radius of investigation, feet                                      |
| r <sub>w</sub>    | = wellbore radius, feet                                                          |
| t <sub>0</sub>    | = total flowing time, minutes                                                    |
| P <sub>0</sub>    | = Extrapolated maximum reservoir pressure, psig                                  |
| P <sub>f</sub>    | = final flowing pressure, psig                                                   |
| P.I.              | = productivity index, bbl./day/psi                                               |
| P.I. <sub>r</sub> | = theoretical productivity index with damage removed, bbl./day/psi               |
| D.R.              | = damage ratio                                                                   |
| E.D.R.            | = estimated damage ratio                                                         |
| AOF               | = absolute open flow potential, MCF/D                                            |
| AOF <sub>r</sub>  | = theoretical absolute open flow if damage were removed                          |
| Z                 | = subsea depth                                                                   |
| W                 | = water gradient based on salinity                                               |
| H <sub>w</sub>    | = potentiometric surface                                                         |

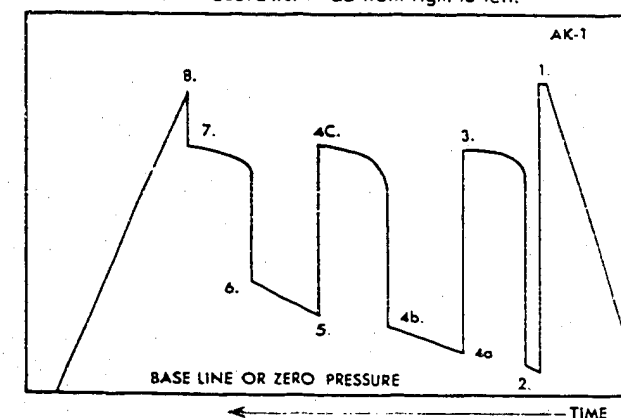
## PRESSURE CHARTS

LYNES

## GUIDE TO INTERPRETATION AND IDENTIFICATION OF LYNES DRILL STEM TEST PRESSURE CHARTS

In making any interpretation, our employees will give Customer the benefit of their best judgment as to the correct interpretation. Nevertheless, since all interpretations are opinions based on inferences from electrical, mechanical or other measurements, we cannot, and do not, guarantee the accuracy or correctness of any interpretations, and we shall not be liable or responsible, except in the case of gross or wilful negligence on our part, for any loss, costs, damages or expenses incurred or sustained by Customer resulting from any interpretation made by any of our agents or employees.

AK-1 recorders. Read from right to left.



1. INITIAL HYDROSTATIC MUD PRESSURE
2. PRE-FLOW
3. INITIAL SHUT-IN
- 4a. 2nd INITIAL FLOW
- 4b. 2nd FINAL FLOW
- 4c. 2nd SHUT-IN
5. 3rd INITIAL FLOW
6. FINAL FLOW
7. FINAL SHUT-IN
8. FINAL HYDROSTATIC MUD PRESSURE

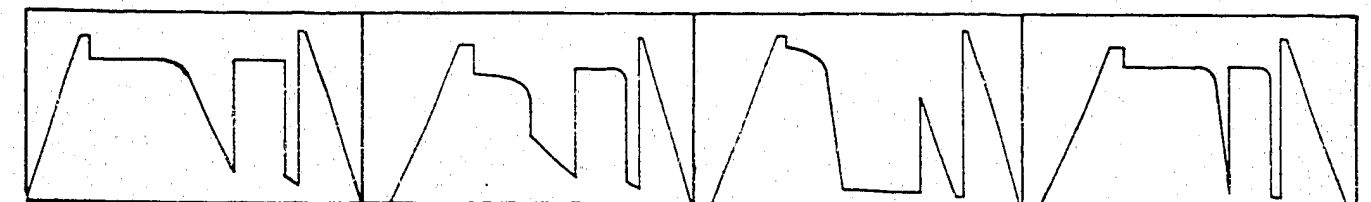
N.B. When only two shut-in and flow periods are run, 4a, 4b and 4c are omitted.

K-K-3 recorders. Read from left to right.

Typical charts for visual field analysis ranging from very low to high permeability.



Very low permeability. Usually only mud recovered from interval tested. Virtually no permeability. Slightly higher permeability. Again usually mud recovered. Slightly higher permeability. Small recovery, less than 200' ft). Average permeability. Final and initial shut-ins differ by 50 psi. Average permeability. Strong damage effect. High shut-in pressure, low flow pressure.



Excellent permeability where final flow final shut-in pressure.

High permeability where FSIP and FSIP are within 10 psi.

Deep well bore invasion or damage. Final shut-in higher than the initial shut-in.

Tight hole chamber tester. Permeability very difficult to interpret unless the recovery is less than chamber length. Flow pressure builds up rapidly if recovery is large, similar to a shut-in.

| INTERPRETATION CALCULATIONS (OIL/WATER)                                                                                                                                                                                                                                                                                                                                    |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <b>AVERAGE PRODUCTION RATE DURING TEST</b><br>$Q = 1440 \left( \frac{\text{drill collar capacity} \times \text{recovery} + \text{drill pipe capacity} \times \text{recovery}}{\text{initial flow time} + \text{final flow time}} \right)$<br>$= 1440 \left( \frac{[ ] + [ ]}{[ ] + [ ]} \right)$<br>$= 1440 [ ] \text{ (0.145 or .0073) } [ ]$<br>$= [ ] \text{ bbl./day}$ |  |
| <b>FLUID PROPERTIES</b><br>API Gravity @ 60° F. = [ ] Specific Gravity @ 60° F. = [ ] Est. Viscosity = [ ] cp<br>Estimated Bottom Hole Temperature = [ ] °F.<br>Mud Expansion = [ ] ft. (Drill Collar Conversion is Considered)                                                                                                                                            |  |
| <b>TRANSMISSIBILITY</b><br>$\frac{kh}{\mu} = \frac{162.6 Q}{m} = \frac{162.6 [ ]}{[ ]} = [ ] \text{ md.-ft./cp}$                                                                                                                                                                                                                                                           |  |
| <b>IN SITU CAPACITY</b><br>$kh = [ ] [ ] = [ ] \text{ md.-ft.}$                                                                                                                                                                                                                                                                                                            |  |
| <b>AVERAGE EFFECTIVE PERMEABILITY</b><br>$k = [ ] = [ ] \text{ md.}$                                                                                                                                                                                                                                                                                                       |  |
| <b>PRODUCTIVITY INDEX</b><br>$PI = \frac{Q}{P_s - P_f} = \frac{[ ]}{[ ] - [ ]} = [ ] \text{ bbl./day/psi}$                                                                                                                                                                                                                                                                 |  |
| <b>DAMAGE RATIO</b><br>$D.R. = \frac{0.183 (P_s - P_f)}{m} = \frac{0.183 [ ] - [ ]}{[ ]} = [ ]$                                                                                                                                                                                                                                                                            |  |
| <b>PRODUCTIVITY INDEX WITH DAMAGE REMOVED</b><br>$PI_{r1} = PI \times D.R. = [ ] [ ] = [ ] \text{ bbl./day/psi}$                                                                                                                                                                                                                                                           |  |
| <b>APPROXIMATE RADIUS OF INVESTIGATION</b><br>$b = \sqrt{\frac{kt}{\phi \mu}} = \sqrt{\frac{[ ] [ ]}{[ ] [ ]}} = [ ] \text{ ft.}$                                                                                                                                                                                                                                          |  |
| <b>Drawdown Factor</b> = $\frac{1.813 P_s - F.S.I.P. \times 100}{I.S.I.P.} = \frac{[ ] - [ ] \times 100}{[ ]} = [ ] \%$ (4% to 5% is considered serious or substantial)                                                                                                                                                                                                    |  |
| <b>Potentiometric Surface</b> = $H_w = Z + \frac{P_s}{W} = [ ] + \frac{[ ]}{[ ]} = [ ] \text{ ft.}$                                                                                                                                                                                                                                                                        |  |

| INTERPRETATION CALCULATIONS (GAS)                                                                                                                                                                                                                                 |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <b>ESTIMATED GAS PROPERTIES</b><br>Gravity @ 60° F. = [ ] Viscosity (Res.) = [ ] cp. Compressibility Factor (Z) = [ ]<br>Estimated Bottom Hole Temperature = [ ] °F.                                                                                              |  |
| <b>TRANSMISSIBILITY</b><br>$\frac{kh}{\mu} = \frac{1637 Q_g Z T_r}{m} = \frac{1637 [ ] [ ] [ ]}{[ ]} = [ ] \text{ md.-ft./cp.}$                                                                                                                                   |  |
| <b>IN SITU CAPACITY</b><br>$kh = [ ] [ ] = [ ] \text{ md.-ft.}$                                                                                                                                                                                                   |  |
| <b>AVERAGE EFFECTIVE PERMEABILITY</b><br>$k = [ ] = [ ] \text{ md.}$                                                                                                                                                                                              |  |
| <b>APPROXIMATE RADIUS OF INVESTIGATION</b><br>$b = 0.02 \sqrt{\frac{kt}{\phi \mu}} = 0.02 \sqrt{\frac{[ ] [ ]}{[ ] [ ]}} = [ ] \text{ ft.}$                                                                                                                       |  |
| <b>ACTUAL CAPACITY</b><br>$kh = \frac{3270 Q_g \mu Z T_r \log(0.472 r_e)}{P_s^2 - P_f^2} = \frac{3270 [ ] [ ] [ ] \log(0.472 [ ])}{[ ]^2 - [ ]^2} = [ ] \text{ md.-ft.}$                                                                                          |  |
| <b>DAMAGE RATIO</b><br>$D.R. = \frac{\text{In Situ Capacity}}{\text{Actual Capacity}} = \frac{[ ]}{[ ]} = [ ]$                                                                                                                                                    |  |
| <b>ESTIMATED RANGE OF AOF POTENTIAL</b><br>$\text{Max. AOF} = \frac{Q_g P_s^2}{P_s^2 - P_f^2} = \frac{[ ] [ ]^2}{[ ]^2 - [ ]^2} = [ ] \text{ MCF/D}$<br>$\text{Min. AOF} = \frac{Q_g P_f^2}{P_s^2 - P_f^2} = \frac{[ ] [ ]^2}{[ ]^2 - [ ]^2} = [ ] \text{ MCF/D}$ |  |
| <b>ESTIMATED RANGE OF AOF POTENTIAL DAMAGE REMOVED</b><br>$\text{Max. AOF}_r = (\text{Max. AOF}) (D.R.) = [ ] [ ] = [ ] \text{ MCF/D}$<br>$\text{Min. AOF}_r = (\text{Min. AOF}) (D.R.) = [ ] [ ] = [ ] \text{ MCF/D}$                                            |  |
| <b>Drawdown Factor</b> = $\frac{1.813 P_s - F.S.I.P. \times 100}{I.S.I.P.} = \frac{[ ] - [ ] \times 100}{[ ]} = [ ] \%$ (4% to 5% is considered serious or substantial)                                                                                           |  |
| <b>Potentiometric Surface</b> = $H_w = Z + \frac{P_s}{W} = [ ] + \frac{[ ]}{[ ]} = [ ] \text{ ft.}$                                                                                                                                                               |  |

# LYNES UNITED SERVICES LTD.

WELL NAME - PACIFIC HE. ALEXANDRA

LOCATION - G-54

DST NUMBER - 2

INTERVAL TESTED - 3170 TO 3240

RECORDER NO. - 2801

DEPTH - 3174

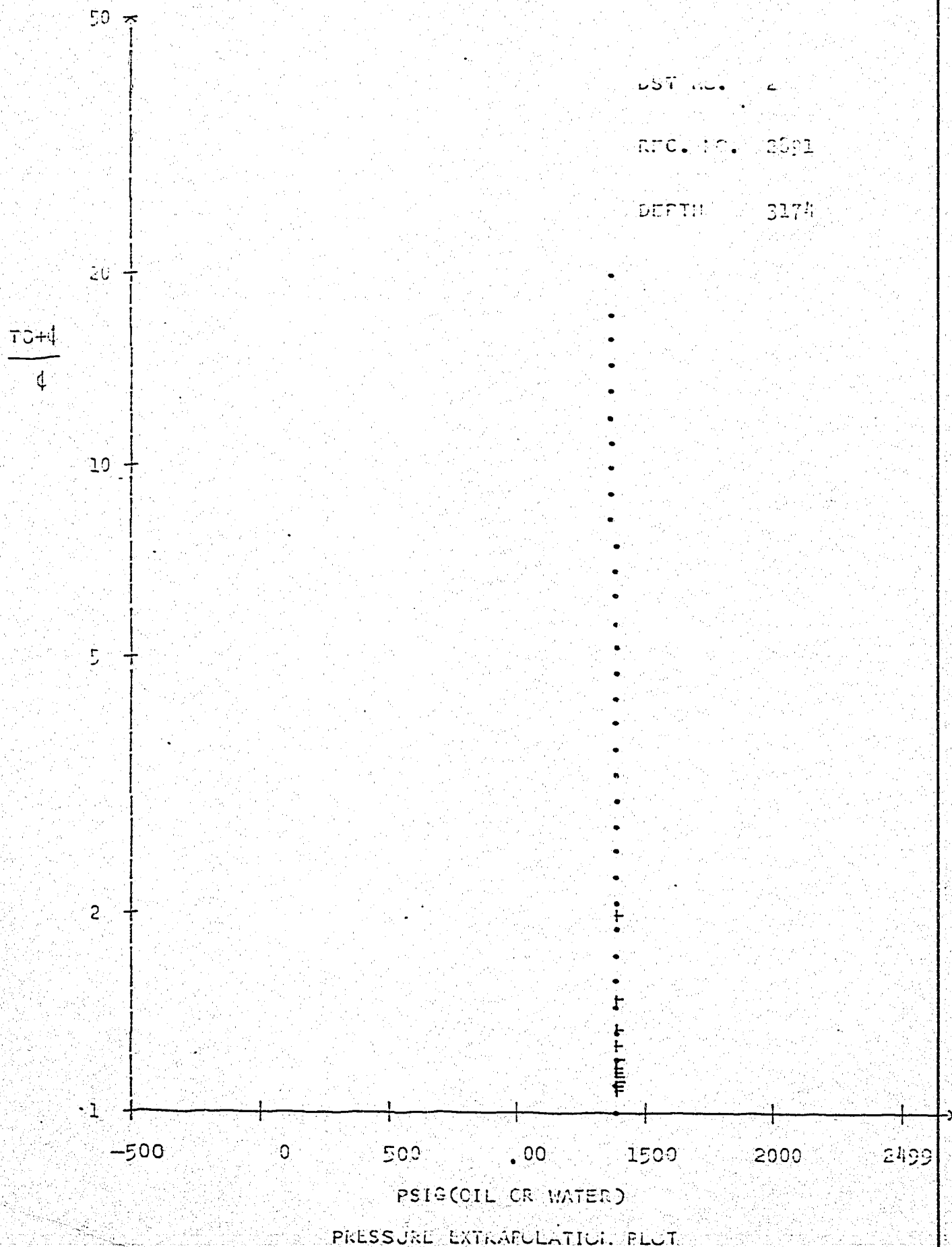
## INITIAL SHUT IN PRESSURE

| TIME(MIN)<br>Φ | $\frac{T + \Phi}{\Phi}$ | PSIG |
|----------------|-------------------------|------|
| 0              | 0.0000                  | 50   |
| 5              | 2.0000                  | 1388 |
| 10             | 1.5000                  | 1389 |
| 15             | 1.3333                  | 1389 |
| 20             | 1.2500                  | 1389 |
| 25             | 1.2000                  | 1389 |
| 30             | 1.1667                  | 1389 |
| 35             | 1.1429                  | 1389 |
| 40             | 1.1250                  | 1389 |
| 45             | 1.1111                  | 1389 |
| 50             | 1.1000                  | 1389 |
| 55             | 1.0909                  | 1389 |
| 60             | 1.0833                  | 1390 |

EQU. FITTED LINE IS  $\log((T+\Phi)/\Phi) = -0.05807 \text{ PSIG} + 80.74722$

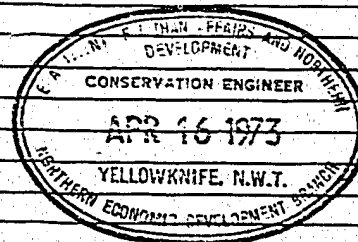
EXTRAPOLATION OF INITIAL SHUT-IN = 1390.60 M= 17.22

# LYNES UNITED SERVICES LTD.



# LYNES UNITED SERVICES LTD.

| TEST DATA                                                                                                      |  |                                 |  | Lynes Test                                                                         |  | GENERAL INFORMATION        |  |
|----------------------------------------------------------------------------------------------------------------|--|---------------------------------|--|------------------------------------------------------------------------------------|--|----------------------------|--|
| Test No. <b>TWO</b>                                                                                            |  | Lynes Test <b>TWO</b>           |  | Company <b>Pacific Petroleum Ltd.</b>                                              |  |                            |  |
| Formation <b>Slave Point</b>                                                                                   |  | T.D. <b>3890</b> Ft.            |  | Address <b>700 - 6th Avenue S.W.</b>                                               |  |                            |  |
| Interval Tested <b>3170</b>                                                                                    |  | Ft. to <b>3240</b>              |  | City <b>Calgary, Alberta</b>                                                       |  |                            |  |
| Interval Tested <b>70</b>                                                                                      |  | Ft. Net Pay Tested              |  |                                                                                    |  |                            |  |
| Type of Test <b>Inflate Straddle</b>                                                                           |  |                                 |  |                                                                                    |  |                            |  |
| Cushion <b>-</b>                                                                                               |  | Amount <b>-</b>                 |  | Well Name <b>Pacific HB Alexandra</b>                                              |  |                            |  |
| Started in Hole at <b>13:00</b> Hrs.                                                                           |  | Tool Open at <b>15:35</b> Hrs.  |  | Well Number <b>0-54</b>                                                            |  |                            |  |
| Pre-Flow <b>5</b> Mins.                                                                                        |  | Initial Shut-in <b>60</b> Mins. |  | K.B. Elevation <b>982</b>                                                          |  | Sub-Sea Elevation          |  |
| 2nd Flow <b>5</b> Mins.                                                                                        |  | Second Shut-in <b>60</b> Mins.  |  | Area <b>Wildcat</b>                                                                |  | Province <b>N.W.T.</b>     |  |
| Final Flow <b>60</b> Mins.                                                                                     |  | Final Shut-in <b>60</b> Mins.   |  | Company Rep. <b>Bob Linton</b>                                                     |  |                            |  |
| Remarks:                                                                                                       |  |                                 |  | Tester <b>Tom Armagost</b>                                                         |  |                            |  |
| Blow: <b>Weak air blow on pre-flow. Weak air blow on final, decreasing slightly at the end of flow period.</b> |  |                                 |  | Contractor <b>Kenting</b> Rig No. <b>9</b>                                         |  |                            |  |
|                                                                                                                |  |                                 |  | Ticket No. <b>5799</b> Date <b>March 8, 1973</b>                                   |  |                            |  |
|                                                                                                                |  |                                 |  | Service Reports To: <b>8 - above address</b>                                       |  |                            |  |
| GAS BLOW MEASUREMENTS                                                                                          |  |                                 |  |                                                                                    |  |                            |  |
| Measured with                                                                                                  |  |                                 |  | MUD AND HOLE DATA                                                                  |  |                            |  |
|                                                                                                                |  |                                 |  | Mud Type <b>Gel - Chemical</b>                                                     |  |                            |  |
|                                                                                                                |  |                                 |  | Weight <b>9.2</b> Viscosity <b>60</b> Water Loss <b>10.0</b>                       |  |                            |  |
|                                                                                                                |  |                                 |  | Filter Cake <b>2/32</b> Bottom Hole Temperature <b>101°</b>                        |  |                            |  |
|                                                                                                                |  |                                 |  | Drill Pipe Size <b>4 1/2</b> FH Weight <b>16.60</b>                                |  |                            |  |
|                                                                                                                |  |                                 |  | Drill Collars <b>4 1/2</b> H-90 I.D. <b>2 7/8</b> Feet Run <b>174</b>              |  |                            |  |
|                                                                                                                |  |                                 |  | Main Hole or Casing Size <b>7 7/8</b>                                              |  |                            |  |
|                                                                                                                |  |                                 |  | Rathole or Liner Size <b>-</b> No. of Feet <b>-</b>                                |  |                            |  |
|                                                                                                                |  |                                 |  | Bottom Hole Choke Size <b>1"</b>                                                   |  |                            |  |
|                                                                                                                |  |                                 |  | Surface Choke Size <b>1"</b>                                                       |  |                            |  |
|                                                                                                                |  |                                 |  | Packer Rubber Size <b>6 x 7 x 72</b> Inflate                                       |  |                            |  |
|                                                                                                                |  |                                 |  | REMARKS                                                                            |  |                            |  |
|                                                                                                                |  |                                 |  | Shut-in pressures suggest relatively high permeability within the interval tested. |  |                            |  |
| RECOVERY                                                                                                       |  |                                 |  |                                                                                    |  |                            |  |
| TOTAL FLUID RECOVERED <b>640</b> Ft. Consisting of:                                                            |  |                                 |  |                                                                                    |  |                            |  |
| <b>60</b> Ft. of <b>Black muddy sulphurous salt water</b>                                                      |  |                                 |  |                                                                                    |  |                            |  |
| <b>580</b> Ft. of <b>Salt water</b>                                                                            |  |                                 |  |                                                                                    |  |                            |  |
|                                                                                                                |  |                                 |  |                                                                                    |  |                            |  |
|                                                                                                                |  |                                 |  |                                                                                    |  |                            |  |
| Test was not Reverse Circulated                                                                                |  |                                 |  |                                                                                    |  |                            |  |
| Oil Recovery A.P.I. <b>80,400</b> PPM Salt                                                                     |  |                                 |  |                                                                                    |  |                            |  |
| Water Specific Gravity                                                                                         |  |                                 |  |                                                                                    |  |                            |  |
| PRESSURE READINGS                                                                                              |  |                                 |  |                                                                                    |  |                            |  |
| Inside _____ Outside <b>X</b>                                                                                  |  | Inside _____ Outside <b>X</b>   |  | Inside _____ Outside <b>X</b>                                                      |  | Inside _____ Outside _____ |  |
| Recorder No. <b>8885</b>                                                                                       |  | Recorder No. <b>2891</b>        |  | Recorder No. <b>7586</b>                                                           |  | Recorder No. _____         |  |
| Capacity <b>2900</b>                                                                                           |  | Capacity <b>3000</b>            |  | Capacity <b>65 - 271</b>                                                           |  | Capacity _____             |  |
| Depth <b>3174</b>                                                                                              |  | Depth <b>3174</b>               |  | Depth <b>3174</b>                                                                  |  | Depth _____                |  |
| NUMBER KEY:                                                                                                    |  |                                 |  |                                                                                    |  |                            |  |
| 1 - INITIAL HYDROSTATIC                                                                                        |  | <b>1626</b>                     |  | <b>1631</b>                                                                        |  |                            |  |
| 2 - PRE-FLOW                                                                                                   |  | <b>62</b>                       |  | <b>59</b>                                                                          |  | <b>100</b>                 |  |
| 3 - INITIAL SHUT-IN                                                                                            |  |                                 |  | <b>1390</b>                                                                        |  |                            |  |
| 4a - 2nd INITIAL FLOW                                                                                          |  | <b>Clock ran</b>                |  |                                                                                    |  |                            |  |
| 4b - 2nd FINAL FLOW                                                                                            |  | <b>out.</b>                     |  |                                                                                    |  |                            |  |
| 4c - 2nd SHUT-IN                                                                                               |  |                                 |  |                                                                                    |  |                            |  |
| 5 - 3rd INITIAL FLOW                                                                                           |  |                                 |  | <b>70</b>                                                                          |  |                            |  |
| 6 - FINAL FLOW                                                                                                 |  |                                 |  | <b>287</b>                                                                         |  |                            |  |
| 7 - FINAL SHUT-IN                                                                                              |  |                                 |  | <b>1390</b>                                                                        |  |                            |  |
| 8 - FINAL HYDROSTATIC                                                                                          |  |                                 |  | <b>1631</b>                                                                        |  |                            |  |



Pacific Petroleum Ltd. Pacific HB Alexandra 0-54 DA 654 Two March 8, 1973

Pacific HB Alexandra O-54  
(60-30-117-45)

D.A. 654

TOUR SHEETS

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Pacific HB Alexandra O-54

60-30-117-45

D.A. 654

## DAILY DRILLING REPORT

REPORT NO.

|                                                              |                                       |                                                             |                        |             |            |          |                   |      |               |
|--------------------------------------------------------------|---------------------------------------|-------------------------------------------------------------|------------------------|-------------|------------|----------|-------------------|------|---------------|
| LEASE<br><b>HB</b><br><b>0-54</b>                            | WELL NO.<br><b>0-54</b>               | API WELL NUMBER<br><b>0-54-60-30-W-117-45-W</b>             | DATE<br><b>10-3-73</b> |             |            |          |                   |      |               |
| OPERATOR<br><b>0-54</b>                                      | CONTRACTOR<br><b>KENTING PETROLIA</b> | RIG NO.<br><b>9</b>                                         |                        |             |            |          |                   |      |               |
| SIGNATURE OF OPERATOR'S REPRESENTATIVE<br><i>[Signature]</i> |                                       | SIGNATURE OF CONTRACTOR'S TOOL PUSHER<br><i>[Signature]</i> |                        |             |            |          |                   |      |               |
| O.P. SIZE                                                    | WT./FT.                               | GRADE                                                       | TOOL JT. Q.D.          | TYPE THREAD | STRING NO. | PUMP NO. | PUMP MANUFACTURER | TYPE | STROKE LENGTH |

## LEGAL LAND DESCRIPTION

|                             |      |           |            |      |                  |        |                                 |          |             |
|-----------------------------|------|-----------|------------|------|------------------|--------|---------------------------------|----------|-------------|
| SIZE                        | MAKE | WT. & GR. | NO. JOINTS | FEET | PKB. TO 1/2" HD. | SET AT | WIRE LINE RECORD                | REEL NO. | FT. SLIPPED |
| 8 1/2                       | STAC | 24 K3486  |            |      |                  | 483    |                                 | 4        |             |
| LAST CASING TUBING OR LINER |      |           |            |      |                  |        | TON MI. OR TRIPS SINCE LAST CUT |          |             |
|                             |      |           |            |      |                  |        | CUMULATIVE TON MI. OR TRIPS     |          |             |

## DRILLING CREW PAYROLL DATA

|                 |                         |
|-----------------|-------------------------|
| DATE            | <b>10-3-73</b>          |
| WELL NAME & NO. | <b>0-54</b>             |
| COMPANY         | <b>Kenting Petrolia</b> |
| TOOL PUSHER     | <b>N. Tompkins</b>      |
| RIG NO.         | <b>9</b>                |

| TIME DISTRIBUTION - HOURS               |                           |       |     | DRILLING ASSEMBLY (At end of tour) |               | BIT RECORD |                     | MUD RECORD        |      |      |
|-----------------------------------------|---------------------------|-------|-----|------------------------------------|---------------|------------|---------------------|-------------------|------|------|
| CODE NO.                                | OPERATION                 | MORN. | DAY | EVE.                               | BIT           | FT.        | BIT NO.             | TIME              |      |      |
| 1.                                      | RIG UP AND TEAR DOWN      |       |     |                                    | STB RMR       | OD         | FT. MFG.            | WEIGHT            |      |      |
| 2.                                      | DRILL ACTUAL              |       |     |                                    | D.C. ID       | OD         | FT. TYPE            | PRESSURE GRADIENT |      |      |
| 3.                                      | REAMING                   |       |     |                                    | STB RMR       | OD         | FT. JETS 1/32"      | VISC-SEC.         |      |      |
| 4.                                      | CORING                    |       |     |                                    | D.C. ID       | OD         | FT. SER. NO.        | PW/YP             |      |      |
| 5.                                      | CONDITION MUD & CIRCULATE |       |     |                                    | STB RMR       | OD         | FT. DEPTH OUT       | GELS              |      |      |
| 6.                                      | TRIPS                     |       |     |                                    |               |            | DEPTH IN            | WL-CC'S           |      |      |
| 7.                                      | LUBRICATE RIG             |       |     |                                    |               |            | TOTAL FTG.          | pH                |      |      |
| 8.                                      | REPAIR RIG                |       |     |                                    |               |            | TOTAL HRS. RUN      | SOLIDS %          |      |      |
| 9.                                      | CUT OFF DRILLING LINE     |       |     |                                    | STANDS DP     | FT.        | COND. 1/8" T/B GAGE |                   |      |      |
| 10.                                     | DEVIATION SURVEY          |       |     |                                    | SINGLES DP    | FT.        | GPM/ PD-PSI         |                   |      |      |
| 11.                                     | WIRE LINE LOGS            |       |     |                                    | KELLY DOWN    | FT.        |                     |                   |      |      |
| 12.                                     | RUN CASING & CEMENT       |       |     |                                    | TOTAL         | FT.        |                     |                   |      |      |
| 13.                                     | WAIT ON CEMENT            |       |     |                                    | WT. OF STRING | LBS.       |                     |                   |      |      |
| 14.                                     | NIPPLE UP B.O.P.          |       |     |                                    |               |            |                     |                   |      |      |
| 15.                                     | TEST B.O.P.               |       |     |                                    |               |            |                     |                   |      |      |
| 16.                                     | DRILL STEM TEST           |       |     |                                    |               |            |                     |                   |      |      |
| 17.                                     | PLUG BACK                 |       |     |                                    |               |            |                     |                   |      |      |
| 18.                                     | SQUEEZE CEMENT            |       |     |                                    | STB RMR       | OD         | FT. MFG.            | WEIGHT            |      |      |
| 19.                                     | FISHING                   |       |     |                                    | D.C. ID       | OD         | FT. TYPE            | PRESSURE GRADIENT |      |      |
| 20.                                     | DIR. WORK                 |       |     |                                    | STB RMR       | OD         | FT. JETS 1/32"      | VISC-SEC.         |      |      |
| 21.                                     |                           |       |     |                                    | D.C. ID       | OD         | FT. SER. NO.        | PW/YP             |      |      |
| 22.                                     |                           |       |     |                                    | STB RMR       | OD         | FT. DEPTH OUT       | GELS              |      |      |
| 23.                                     |                           |       |     |                                    |               |            | DEPTH IN            | WL-CC'S           |      |      |
| COMPLETION                              |                           |       |     | A. PERF'TN                         |               |            | TOTAL FTG.          | pH                |      |      |
|                                         |                           |       |     | B. TBG TRIPS                       |               |            | TOTAL HRS. RUN      | SOLIDS %          |      |      |
|                                         |                           |       |     | C. TREATING                        |               |            | COND. 1/8" T/B GAGE |                   |      |      |
|                                         |                           |       |     | D. SWABBING                        |               |            | TYPE                | AMT.              | TYPE | AMT. |
|                                         |                           |       |     | E. TESTING                         |               |            |                     |                   |      |      |
| F. ADDIT'L                              |                           |       |     |                                    |               |            |                     |                   |      |      |
| G.                                      |                           |       |     |                                    |               |            |                     |                   |      |      |
| TOTALS                                  |                           |       |     |                                    |               |            |                     |                   |      |      |
| DAY WORK TIME SUMMARY (OFFICE USE ONLY) |                           |       |     |                                    |               |            |                     |                   |      |      |
| HRS. W/CONTR. D.P.                      |                           |       |     |                                    |               |            |                     |                   |      |      |
| HRS. W/OPR. D.P.                        |                           |       |     |                                    |               |            |                     |                   |      |      |
| HRS. NO/D.P.                            |                           |       |     |                                    |               |            |                     |                   |      |      |
| HRS. STANDBY                            |                           |       |     |                                    |               |            |                     |                   |      |      |
| TOTAL DAY WORK                          |                           |       |     |                                    |               |            |                     |                   |      |      |
| NO. OF DAYS FROM LOG                    |                           |       |     |                                    |               |            |                     |                   |      |      |
| CUMULATIVE ROTATING HRS.                |                           |       |     |                                    |               |            |                     |                   |      |      |
| TOTAL MUD COST                          |                           |       |     |                                    |               |            |                     |                   |      |      |

| FOOTAGE                                |    | DR. D RM-R CORE-C | CORE NO. | FORMATION (SHOW CORE RECOVERY) | ROTARY RPM | WT. ON BIT 1000 # | PUMP PRESS | PUMP NO.   | PUMP NO. | METHOD RUN          |
|----------------------------------------|----|-------------------|----------|--------------------------------|------------|-------------------|------------|------------|----------|---------------------|
| FROM                                   | TO |                   |          |                                |            |                   |            | LINER SIZE | S.P.M.   | SC. S. PARTS CONTG. |
| 1100C. LAY DOWN PIPE.                  |    |                   |          |                                |            |                   |            |            |          |                     |
| FELT PLUG # 3 @ 300 AM @ 410'          |    |                   |          |                                |            |                   |            |            |          |                     |
| LAY DOWN REMAINING 9 STANDS DRILL PIPE |    |                   |          |                                |            |                   |            |            |          |                     |
| LAY DOWN BOPS CLEAN COLLAR CUT OFF     |    |                   |          |                                |            |                   |            |            |          |                     |
| CASQ 3' BELOW GROUND PUT 5 SAC PLUG IN |    |                   |          |                                |            |                   |            |            |          |                     |
| CASQ XWELD ON STEEL PLATE W/ RIGID &   |    |                   |          |                                |            |                   |            |            |          |                     |
| WELL SIGN                              |    |                   |          |                                |            |                   |            |            |          |                     |
| 5 SAC PLUG IN PAT HOLE & MOUSE HOLE    |    |                   |          |                                |            |                   |            |            |          |                     |
| DRILLER                                |    |                   |          |                                |            |                   |            |            |          |                     |
| Rig released 800 AM Mar 10/73          |    |                   |          |                                |            |                   |            |            |          |                     |
| DRILLER                                |    |                   |          |                                |            |                   |            |            |          |                     |

| DEVIATION RECORD |     | DEPTH        | DEV.     | DIRECTION                                     | DEPTH | DEV. | DIRECTION | DEPTH | DEV. | DIRECTION |
|------------------|-----|--------------|----------|-----------------------------------------------|-------|------|-----------|-------|------|-----------|
| TIME LOG         |     |              |          |                                               |       |      |           |       |      |           |
| FROM             | TO  | ELAPSED TIME | CODE NO. | DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS |       |      |           |       |      |           |
| 1200             | 300 | 3            |          |                                               |       |      |           |       |      |           |
| 300              | 800 | 5            |          |                                               |       |      |           |       |      |           |

| FOOTAGE                       |    | DR. D RM-R CORE-C | CORE NO. | FORMATION (SHOW CORE RECOVERY) | ROTARY RPM | WT. ON BIT 1000 # | PUMP PRESS | PUMP NO.   | PUMP NO. | METHOD RUN          |
|-------------------------------|----|-------------------|----------|--------------------------------|------------|-------------------|------------|------------|----------|---------------------|
| FROM                          | TO |                   |          |                                |            |                   |            | LINER SIZE | S.P.M.   | SC. S. PARTS CONTG. |
| Rig released 800 AM Mar 10/73 |    |                   |          |                                |            |                   |            |            |          |                     |
| DRILLER                       |    |                   |          |                                |            |                   |            |            |          |                     |

| DEVIATION RECORD |    | DEPTH        | DEV.     | DIRECTION                                     | DEPTH | DEV. | DIRECTION | DEPTH | DEV. | DIRECTION |
|------------------|----|--------------|----------|-----------------------------------------------|-------|------|-----------|-------|------|-----------|
| TIME LOG         |    |              |          |                                               |       |      |           |       |      |           |
| FROM             | TO | ELAPSED TIME | CODE NO. | DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS |       |      |           |       |      |           |
|                  |    |              |          |                                               |       |      |           |       |      |           |

| FOOTAGE          |    | DR. D RM-R CORE-C | CORE NO. | FORMATION (SHOW CORE RECOVERY)                | ROTARY RPM | WT. ON BIT 1000 # | PUMP PRESS | PUMP NO.   | PUMP NO. | METHOD RUN          |
|------------------|----|-------------------|----------|-----------------------------------------------|------------|-------------------|------------|------------|----------|---------------------|
| FROM             | TO |                   |          |                                               |            |                   |            | LINER SIZE | S.P.M.   | SC. S. PARTS CONTG. |
|                  |    |                   |          |                                               |            |                   |            |            |          |                     |
| DEVIATION RECORD |    |                   |          |                                               |            |                   |            |            |          |                     |
| TIME LOG         |    |                   |          |                                               |            |                   |            |            |          |                     |
| FROM             | TO | ELAPSED TIME      | CODE NO. | DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS |            |                   |            |            |          |                     |
|                  |    |                   |          |                                               |            |                   |            |            |          |                     |

| MORNING TOUR |               |            |      | P.M. | A.M. |
|--------------|---------------|------------|------|------|------|
| CREW         | SOC. SEC. NO. | NAME       | HRS. |      |      |
| DRILLER      |               | L. SANDER  | 12   |      |      |
| DRKMAN       |               | J. FELAND  | 12   |      |      |
| MTRMAN       |               | D. WITTER  | 10   |      |      |
| FIREMAN      |               |            |      |      |      |
| FLRMAN       |               | G. SARMAEA | 10   |      |      |
| FLRMAN       |               |            |      |      |      |
| FLRMAN       |               |            |      |      |      |

| DAY TOUR |               |                  |      | A.M. | P.M. |
|----------|---------------|------------------|------|------|------|
| CREW     | SOC. SEC. NO. | NAME             | HRS. |      |      |
| DRILLER  |               | GARRY WOODBRIDGE | 8    |      |      |
| DRKMAN   |               | LEO TOMERZAK     | 8    |      |      |
| MTRMAN   |               | PANDY CHISHOLM   | 8    |      |      |
| FIREMAN  |               |                  |      |      |      |
| FLRMAN   |               | VICTOR HOLMES    | 8    |      |      |
| FLRMAN   |               |                  |      |      |      |
| FLRMAN   |               |                  |      |      |      |

| EVENING TOUR |               |      |      | P.M. | P.M. |
|--------------|---------------|------|------|------|------|
| CREW         | SOC. SEC. NO. | NAME | HRS. |      |      |
| DRILLER      |               |      |      |      |      |
| DRKMAN       |               |      |      |      |      |
| MTRMAN       |               |      |      |      |      |
| FIREMAN      |               |      |      |      |      |
| FLRMAN       |               |      |      |      |      |
| FLRMAN       |               |      |      |      |      |
| FLRMAN       |               |      |      |      |      |



| LEGAL LAND DESCRIPTION      |        |      |           |            |      |                  |        | WIRE LINE RECORD                           |           |                | REEL NO. |
|-----------------------------|--------|------|-----------|------------|------|------------------|--------|--------------------------------------------|-----------|----------------|----------|
| LAST CASING TUBING OR LINER | SIZE   | MAKE | WT. & GR. | NO. JOINTS | FEET | RKB. TO CSG. HD. | SET AT | SIZE                                       | NO. LINES | FT. SLIPPED    |          |
|                             | 8 5/8" | STC  | 24 1/2    | 12         | 486  |                  | 483    | 1"                                         | 8         |                |          |
|                             |        |      |           |            |      |                  |        | FT. CUT OFF                                |           | PRESENT LENGTH |          |
|                             |        |      |           |            |      |                  |        | TON MI. OR TRIPS SINCE LAST CUT            |           |                |          |
|                             |        |      |           |            |      |                  |        | CUMULATIVE TON MI. OR TRIPS SINCE LAST CUT |           |                |          |

DRILLING CREW PAYROLL DATA  
DATE 9-3-73  
WELL NAME & NO. PACIFIC AMOCO ALEXANDRA 054  
COMPANY KENTING PETROLIA  
TOOL PUSHER N. SNYDER RIG NO. 9

[illegible][illegible]

| FOOTAGE             |  |                 |  |          |  |                                               |  |                 |  |                   |  |           |  | DR-D<br>RM-P<br>CORE-C | CORE NO. | FORMATION<br>(SHOW CORE RECOVERY) | ROTARY<br>RPM | WT. ON<br>BIT<br>1000 LBS | PUMP<br>PRESS | PUMP NO. |  | PUMP NO. |  | METH<br>RPM |
|---------------------|--|-----------------|--|----------|--|-----------------------------------------------|--|-----------------|--|-------------------|--|-----------|--|------------------------|----------|-----------------------------------|---------------|---------------------------|---------------|----------|--|----------|--|-------------|
| FROM                |  | TO              |  |          |  |                                               |  |                 |  |                   |  |           |  |                        |          |                                   |               |                           |               |          |  |          |  |             |
| Run Plug #1         |  | 3690-3890       |  | 200'     |  | 90 SAX CONST CEMENT                           |  | DISP w/ 51 BAGS |  |                   |  |           |  |                        |          |                                   |               |                           |               |          |  |          |  |             |
| Plug down           |  | 830 AM          |  | MAR 9/73 |  |                                               |  |                 |  |                   |  |           |  |                        |          |                                   |               |                           |               |          |  |          |  |             |
| DEVIATION<br>RECORD |  | DEPTH           |  | DEV.     |  | DIRECTION                                     |  | DEPTH           |  | DEV.              |  | DIRECTION |  | DEPTH                  |          | DEV.                              |               | DIRECTION                 |               |          |  |          |  |             |
|                     |  |                 |  |          |  |                                               |  |                 |  |                   |  |           |  |                        |          |                                   |               |                           |               |          |  |          |  |             |
| TIME LOG            |  | ELAPSED<br>TIME |  | CODE NO. |  | DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS |  |                 |  |                   |  |           |  |                        |          |                                   |               |                           |               |          |  |          |  |             |
| FROM                |  | TO              |  |          |  |                                               |  |                 |  |                   |  |           |  |                        |          |                                   |               |                           |               |          |  |          |  |             |
| 800                 |  | 830             |  | 1/2      |  | Run Plug #1                                   |  |                 |  |                   |  |           |  |                        |          |                                   |               |                           |               |          |  |          |  |             |
| 830                 |  | 845             |  | 1/4      |  | Pull out to 3432                              |  |                 |  |                   |  |           |  |                        |          |                                   |               |                           |               |          |  |          |  |             |
| 845                 |  | 915             |  | 1/2      |  | Run Plug #2                                   |  |                 |  |                   |  |           |  |                        |          |                                   |               |                           |               |          |  |          |  |             |
| 915                 |  | 400             |  | 6 3/4    |  | U.O.C.                                        |  |                 |  |                   |  |           |  |                        |          |                                   |               |                           |               |          |  |          |  |             |
| Run Plug #2         |  | 3117-3432       |  | 315'     |  | 160 SAX CONST. CEMENT                         |  | 2 1/2 catch     |  | DISP w/ 42.5 BAGS |  | Plug down |  | 915 AM                 |          | MAR 9/73                          |               |                           |               |          |  |          |  |             |

[illegible]

| FOOTAGE                                     |      | DR-D<br>R-L<br>CORE-C | CORE NO. | FORMATION<br>(SHOW CORE RECOVERY)             |       | ROTARY<br>RPM | WT. ON<br>BIT<br>1000' | PUMP<br>PRESS | PUMP NO.      |           | PUMP NO.      |        | METH<br>RUM        |
|---------------------------------------------|------|-----------------------|----------|-----------------------------------------------|-------|---------------|------------------------|---------------|---------------|-----------|---------------|--------|--------------------|
| FROM                                        | TO   |                       |          |                                               |       |               |                        |               | LINER<br>SIZE | S.P.M.    | LINER<br>SIZE | S.P.M. | SG<br>CAP<br>COUNT |
| FELT Plug # 2 @ 515 Pm. w/ 5000' @ 30 TD KB |      |                       |          |                                               |       |               |                        |               |               |           |               |        |                    |
|                                             |      |                       |          |                                               |       |               |                        |               |               |           |               |        |                    |
|                                             |      |                       |          |                                               |       |               |                        |               |               |           |               |        |                    |
| DEVIATION<br>RECORD                         |      | DEPTH                 | DEV.     | DIRECTION                                     | DEPTH | DEV.          | DIRECTION              | DEPTH         | DEV.          | DIRECTION |               |        |                    |
|                                             |      |                       |          |                                               |       |               |                        |               |               |           |               |        |                    |
| TIME LOG                                    |      | ELAPSED<br>TIME       | CODE NO. | DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS |       |               |                        |               |               |           |               |        |                    |
| FROM                                        | TO   |                       |          |                                               |       |               |                        |               |               |           |               |        |                    |
| 400                                         | 515  | 1 1/4                 |          | WOC FELT Plug # 2 @ 515 @ 30 TD               |       |               |                        |               |               |           |               |        |                    |
| 515                                         | 630  | 1 1/4                 |          | PULLED OUT TO 533'                            |       |               |                        |               |               |           |               |        |                    |
| 630                                         | 700  | 1/2                   |          | RAN Plug # 3                                  |       |               |                        |               |               |           |               |        |                    |
| 700                                         | 1200 | 5                     |          | WOC. LAY DOWN DRILL PIPE                      |       |               |                        |               |               |           |               |        |                    |
| RAN Plug # 3                                |      |                       |          | 433-533 100' TO SAN CONST. CEMENT 2 1/2" DIA  |       |               |                        |               |               |           |               |        |                    |
| DISP w/ 4 GALS WATER                        |      |                       |          | Plug down 700 Pm mpr 4/1/73                   |       |               |                        |               |               |           |               |        |                    |

[illegible]

|                                                              |                                       |                                                |                                               |
|--------------------------------------------------------------|---------------------------------------|------------------------------------------------|-----------------------------------------------|
| LEASE<br><b>PACIFIC HB</b>                                   | WELL NO.<br><b>054</b>                | API WELL NUMBER<br><b>054-60-30-W-117-45-W</b> | DATE<br><b>8-3-73</b>                         |
| OPERATOR<br><b>PACIFIC PETROLEUMS LTD.</b>                   | CONTRACTOR<br><b>KENTING PETROLIA</b> | RIG NO.<br><b>9</b>                            |                                               |
| SIGNATURE OF OPERATOR'S REPRESENTATIVE<br><i>[Signature]</i> |                                       | SIGNATURE OF CONTRACTOR'S TOOL PUSHER          |                                               |
| D.P. SIZE<br><b>4 1/2</b>                                    | WT./FT.<br><b>1660</b>                | GRADE<br><b>3</b>                              | TOOL JT. Q.D. TYPE THREAD<br><b>5 7/8" FH</b> |
| STRING NO.<br><b>1</b>                                       | PUMP NO.<br><b>1</b>                  | PUMP MANUFACTURER<br><b>CONT FMSCO</b>         | TYPE<br><b>D-300</b>                          |
| STROKE LENGTH<br><b>14"</b>                                  |                                       |                                                |                                               |

| TIME DISTRIBUTION - HOURS               |                           |       |     | NO.  |               | DRILLING ASSEMBLY<br>(At end of tour) |                     | BIT RECORD |      | MUD RECORD |      |
|-----------------------------------------|---------------------------|-------|-----|------|---------------|---------------------------------------|---------------------|------------|------|------------|------|
| CODE NO.                                | OPERATION                 | MORN. | DAY | EVE. | BIT           | FT.                                   | BIT NO.             | SIZE       | TIME | WEIGHT     |      |
| 1                                       | RIG UP AND TEAR DOWN      |       |     |      |               |                                       |                     |            |      |            | 9.2  |
| 2                                       | DRILL ACTUAL              |       |     |      | STB RMR       | OD                                    | FT. MFG.            |            |      |            |      |
| 3                                       | REAMING                   |       |     |      | D.C. ID       | OD                                    | FT. TYPE            |            |      |            | 60   |
| 4                                       | CORING                    |       |     |      | STB RMR       | OD                                    | FT. JETS 1/32"      |            |      |            |      |
| 5                                       | CONDITION MUD & CIRCULATE |       |     |      | D.C. ID       | OD                                    | FT. SER. NO.        |            |      |            |      |
| 6                                       | TRIPS                     |       |     |      | STB RMR       | OD                                    | FT. DEPTH OUT       |            |      |            | 10.0 |
| 7                                       | LUBRICATE RIG             |       |     |      |               |                                       | DEPTH IN            |            |      |            |      |
| 8                                       | REPAIR RIG                |       |     |      |               |                                       | TOTAL FTG.          |            |      |            | 5.7  |
| 9                                       | CUT OFF DRILLING LINE     |       |     |      |               |                                       | TOTAL HRS. RUN      |            |      |            |      |
| 10                                      | DEVIATION SURVEY          |       |     |      | STANDS DP     | FT.                                   | COND. 1/8" T/B GAGE |            |      |            |      |
| 11                                      | WIRE LINE LOGS            |       |     |      | SINGLES DP    | FT.                                   | GPW/PD-PSI          |            |      |            |      |
| 12                                      | RUN CASING & CEMENT       |       |     |      | KELLY DOWN    | FT.                                   |                     |            |      |            |      |
| 13                                      | WAIT ON CEMENT            |       |     |      | TOTAL         | FT.                                   |                     |            |      |            |      |
| 14                                      | NIPPLE UP B.O.P.          |       |     |      | WT. OF STRING | LBS.                                  |                     |            |      |            |      |
| 15                                      | TEST B.O.P.               |       |     |      |               |                                       |                     |            |      |            |      |
| 16                                      | DRILL STEM TEST           |       |     |      |               |                                       |                     |            |      |            |      |
| 17                                      | PLUG BACK                 |       |     |      |               |                                       |                     |            |      |            |      |
| 18                                      | SQUEEZE CEMENT            |       |     |      | STB RMR       | OD                                    | FT. MFG.            |            |      |            |      |
| 19                                      | FISHING                   |       |     |      | D.C. ID       | OD                                    | FT. TYPE            |            |      |            |      |
| 20                                      | DIR. WORK                 |       |     |      | STB RMR       | OD                                    | FT. JET 1/32"       |            |      |            |      |
| 21                                      |                           |       |     |      | D.C. ID       | OD                                    | FT. SER. NO.        |            |      |            |      |
| 22                                      |                           |       |     |      | STB RMR       | OD                                    | FT. DEPTH OUT       |            |      |            |      |
| 23                                      |                           |       |     |      |               |                                       | DEPTH IN            |            |      |            |      |
| 24                                      |                           |       |     |      |               |                                       | TOTAL FTG.          |            |      |            |      |
| 25                                      |                           |       |     |      |               |                                       | TOTAL HRS. RUN      |            |      |            |      |
| 26                                      |                           |       |     |      | STANDS DP     | FT.                                   | COND. 1/8" T/B GAGE |            |      |            |      |
| 27                                      |                           |       |     |      | SINGLES DP    | FT.                                   | GPW/PD-PSI          |            |      |            |      |
| 28                                      |                           |       |     |      | KELLY DOWN    | FT.                                   |                     |            |      |            |      |
| 29                                      |                           |       |     |      | TOTAL         | FT.                                   |                     |            |      |            |      |
| 30                                      |                           |       |     |      | WT. OF STRING | LBS.                                  |                     |            |      |            |      |
| COMPLETION                              |                           |       |     |      |               |                                       |                     |            |      |            |      |
| A. PERFORATION                          |                           |       |     |      |               |                                       |                     |            |      |            |      |
| B. TBC TRIPS                            |                           |       |     |      |               |                                       |                     |            |      |            |      |
| C. TREATING                             |                           |       |     |      |               |                                       |                     |            |      |            |      |
| D. SWABBING                             |                           |       |     |      |               |                                       |                     |            |      |            |      |
| E. TESTING                              |                           |       |     |      |               |                                       |                     |            |      |            |      |
| F. ADDITIONAL                           |                           |       |     |      |               |                                       |                     |            |      |            |      |
| G.                                      |                           |       |     |      |               |                                       |                     |            |      |            |      |
| TOTALS                                  |                           |       |     |      |               |                                       |                     |            |      |            |      |
| DAY WORK TIME SUMMARY (OFFICE USE ONLY) |                           |       |     |      |               |                                       |                     |            |      |            |      |
| HRS. W/CONTR. D.P.                      |                           |       |     |      |               |                                       |                     |            |      |            |      |
| HRS. W/OPR. D.P.                        |                           |       |     |      |               |                                       |                     |            |      |            |      |
| HRS. WD/D.P.                            |                           |       |     |      |               |                                       |                     |            |      |            |      |
| HRS. STANDBY                            |                           |       |     |      |               |                                       |                     |            |      |            |      |
| TOTAL DAY WORK                          |                           |       |     |      |               |                                       |                     |            |      |            |      |
| NO. OF DAYS FROM START                  |                           |       |     |      |               |                                       |                     |            |      |            |      |
| CUMULATIVE ROTATING HRS.                |                           |       |     |      |               |                                       |                     |            |      |            |      |
| TOTAL MUD COST                          |                           |       |     |      |               |                                       |                     |            |      |            |      |

| LEGAL LAND DESCRIPTION<br><b>054-60-30-W-117-45-W</b>           |            |                 |            |                                               |                  |            |          |           |             | WIRE LINE RECORD<br>REEL NO. <b>4</b> |                |  |  |  |  |  |  |  |  |
|-----------------------------------------------------------------|------------|-----------------|------------|-----------------------------------------------|------------------|------------|----------|-----------|-------------|---------------------------------------|----------------|--|--|--|--|--|--|--|--|
| SIZE                                                            | MAKE       | WT. & GR.       | NO. JOINTS | FEET                                          | RKB. TO CSG. HD. | SET AT     | SIZE     | NO. LINES | FT. SLIPPED | FT. CUT OFF                           | PRESENT LENGTH |  |  |  |  |  |  |  |  |
| <b>8 5/8"</b>                                                   | <b>STB</b> | <b>KS</b>       | <b>24</b>  | <b>12</b>                                     | <b>486</b>       | <b>483</b> |          |           |             |                                       |                |  |  |  |  |  |  |  |  |
| TON MI. OR TRIPS SINCE LAST CUT                                 |            |                 |            |                                               |                  |            |          |           |             |                                       |                |  |  |  |  |  |  |  |  |
| CUMULATIVE TON MI. OR TRIPS                                     |            |                 |            |                                               |                  |            |          |           |             |                                       |                |  |  |  |  |  |  |  |  |
| FORMATION (SHOW CORE RECOVERY)                                  |            |                 |            |                                               |                  |            |          |           |             |                                       |                |  |  |  |  |  |  |  |  |
| FROM                                                            | TO         | DR-D RMR-CORE-C | CORE NO.   | ROTARY RPM                                    | WT. ON BIT 1000# | PUMP PRESS | PUMP NO. | LINE SIZE | S.P.M.      | LINE SIZE                             | S.P.M.         |  |  |  |  |  |  |  |  |
| DEVIATION RECORD                                                |            |                 |            |                                               |                  |            |          |           |             |                                       |                |  |  |  |  |  |  |  |  |
| TIME LOG                                                        |            |                 |            |                                               |                  |            |          |           |             |                                       |                |  |  |  |  |  |  |  |  |
| FROM                                                            | TO         | ELAPSED TIME    | CODE NO.   | DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS |                  |            |          |           |             |                                       |                |  |  |  |  |  |  |  |  |
| 1200                                                            | 145        | 1 3/4           |            | TEST                                          |                  |            |          |           |             |                                       |                |  |  |  |  |  |  |  |  |
| 145                                                             | 215        | 1/2             |            | PULL PACKER LOOSE + TEAR OUT TESTING HEAD.    |                  |            |          |           |             |                                       |                |  |  |  |  |  |  |  |  |
| 215                                                             | 500        | 2 3/4           |            | TRIP OUT WITH DST #1                          |                  |            |          |           |             |                                       |                |  |  |  |  |  |  |  |  |
| 500                                                             | 800        | 3               |            | W.O.O.                                        |                  |            |          |           |             |                                       |                |  |  |  |  |  |  |  |  |
| DST #1 INT 3500 - 3635 LYNES INFILTR STRADDLE (Keg River)       |            |                 |            |                                               |                  |            |          |           |             |                                       |                |  |  |  |  |  |  |  |  |
| 5 min - 60 min - 90 min - 90 min FAB ON PRE-FLD FAB ON          |            |                 |            |                                               |                  |            |          |           |             |                                       |                |  |  |  |  |  |  |  |  |
| UO PERIOD STEADY TO END OF TEST RECD 2990' (500' MUDDY SULPHUR) |            |                 |            |                                               |                  |            |          |           |             |                                       |                |  |  |  |  |  |  |  |  |
| BUS. SALT WATER 2490' SALT WATER 3400' PM DRILLER C. JAMES      |            |                 |            |                                               |                  |            |          |           |             |                                       |                |  |  |  |  |  |  |  |  |
| FORMATION (SHOW CORE RECOVERY)                                  |            |                 |            |                                               |                  |            |          |           |             |                                       |                |  |  |  |  |  |  |  |  |
| FROM                                                            | TO         | DR-D RMR-CORE-C | CORE NO.   | ROTARY RPM                                    | WT. ON BIT 1000# | PUMP PRESS | PUMP NO. | LINE SIZE | S.P.M.      | LINE SIZE                             | S.P.M.         |  |  |  |  |  |  |  |  |
| DEVIATION RECORD                                                |            |                 |            |                                               |                  |            |          |           |             |                                       |                |  |  |  |  |  |  |  |  |
| TIME LOG                                                        |            |                 |            |                                               |                  |            |          |           |             |                                       |                |  |  |  |  |  |  |  |  |
| FROM                                                            | TO         | ELAPSED TIME    | CODE NO.   | DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS |                  |            |          |           |             |                                       |                |  |  |  |  |  |  |  |  |
| 800                                                             | 1015       | 2 1/4           |            | W.O.O.                                        |                  |            |          |           |             |                                       |                |  |  |  |  |  |  |  |  |
| 1015                                                            | 1145       | 1 1/2           |            | REPAIR BRAKES ON RIG                          |                  |            |          |           |             |                                       |                |  |  |  |  |  |  |  |  |
| 1145                                                            | 130        | 1 1/2           |            | HOOK UP TEST                                  |                  |            |          |           |             |                                       |                |  |  |  |  |  |  |  |  |
| 130                                                             | 370        | 2 1/2           |            | TRIP IN DST #2                                |                  |            |          |           |             |                                       |                |  |  |  |  |  |  |  |  |
| 370                                                             | 400        | 1/2             |            | TEST                                          |                  |            |          |           |             |                                       |                |  |  |  |  |  |  |  |  |
| DST #2 INT 3170 - 3240 (SLAVE PL) 5-60-60-60 WAB ON PRE-FLD WAB |            |                 |            |                                               |                  |            |          |           |             |                                       |                |  |  |  |  |  |  |  |  |
| ON UO PERIOD DECREASING SL STAND OF TEST RECD 640' (60' BLACK)  |            |                 |            |                                               |                  |            |          |           |             |                                       |                |  |  |  |  |  |  |  |  |
| MUDDY SULPHUROUS WATER 580' SALT WATER 80400 PM DRILLER         |            |                 |            |                                               |                  |            |          |           |             |                                       |                |  |  |  |  |  |  |  |  |
| FORMATION (SHOW CORE RECOVERY)                                  |            |                 |            |                                               |                  |            |          |           |             |                                       |                |  |  |  |  |  |  |  |  |
| FROM                                                            | TO         | DR-D RMR-CORE-C | CORE NO.   | ROTARY RPM                                    | WT. ON BIT 1000# | PUMP PRESS | PUMP NO. | LINE SIZE | S.P.M.      | LINE SIZE                             | S.P.M.         |  |  |  |  |  |  |  |  |
| DEVIATION RECORD                                                |            |                 |            |                                               |                  |            |          |           |             |                                       |                |  |  |  |  |  |  |  |  |
| TIME LOG                                                        |            |                 |            |                                               |                  |            |          |           |             |                                       |                |  |  |  |  |  |  |  |  |
| FROM                                                            | TO         | ELAPSED TIME    | CODE NO.   | DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS |                  |            |          |           |             |                                       |                |  |  |  |  |  |  |  |  |
| 400                                                             | 645        | 2 3/4           |            | TEST                                          |                  |            |          |           |             |                                       |                |  |  |  |  |  |  |  |  |
| 645                                                             | 700        | 1/4             |            | PULL TOOLS LOOSE - BRK DOWN TEST HEAD         |                  |            |          |           |             |                                       |                |  |  |  |  |  |  |  |  |
| 700                                                             | 900        | 2               |            | TRIP OUT DST #2                               |                  |            |          |           |             |                                       |                |  |  |  |  |  |  |  |  |
| 900                                                             | 1100       | 2               |            | W.O.O.                                        |                  |            |          |           |             |                                       |                |  |  |  |  |  |  |  |  |
| 1100                                                            | 1200       | 1               |            | BRK DOWN TEST TOOL AND LOAD OUT SAME          |                  |            |          |           |             |                                       |                |  |  |  |  |  |  |  |  |

| DRILLING CREW PAYROLL DATA                         |               |                 |      |
|----------------------------------------------------|---------------|-----------------|------|
| DATE <b>8-3-73</b>                                 |               |                 |      |
| WELL NAME & NO. <b>PACIFIC AMOCO ALEX: 054</b>     |               |                 |      |
| COMPANY <b>Kenting Petrolia</b>                    |               |                 |      |
| TOOL PUSHER <b>N. SNYDER</b> RIG NO. <b>9</b>      |               |                 |      |
| MORNING TOUR <b>1200</b> P.M. <b>800</b> A.M.      |               |                 |      |
| CREW                                               | SOC. SEC. NO. | NAME            | HRS. |
| DRILLER                                            |               | C. SANDOQUIST   | 8    |
| DRKMAN                                             |               | D. LAUCK        | 8    |
| MTRMAN                                             |               | R. THIEL        | 8    |
| FIREMAN                                            |               |                 |      |
| FLRMAN                                             |               | B. DOMEY        | 8    |
| FLRMAN                                             |               |                 |      |
| FLRMAN                                             |               |                 |      |
| NO. OF DAYS <b>4</b> SINCE LAST LOST TIME ACCIDENT |               |                 |      |
| DAY TOUR <b>4</b> A.M. <b>12</b> P.M.              |               |                 |      |
| CREW                                               | SOC. SEC. NO. | NAME            | HRS. |
| DRILLER                                            |               | Perry Woolridge | 8    |
| DRKMAN                                             |               | Leo Tomczak     | 8    |
| MTRMAN                                             |               | Perry Chisholm  | 8    |
| FIREMAN                                            |               | Victor Holmes   | 8    |
| FLRMAN                                             |               | Tim Cochran     | 8    |
| FLRMAN                                             |               |                 |      |
| FLRMAN                                             |               |                 |      |
| NO. OF DAYS <b>4</b> SINCE LAST LOST TIME ACCIDENT |               |                 |      |
| EVENING TOUR <b>4</b> P.M. <b>12</b> P.M.          |               |                 |      |
| CREW                                               | SOC. SEC. NO. | NAME            | HRS. |
| DRILLER                                            |               | J. SANDER       | 8    |
| DRKMAN                                             |               | T. ELAND        | 8    |
| MTRMAN                                             |               | D. WITTER       | 8    |
| FIREMAN                                            |               |                 |      |
| FLRMAN                                             |               | E. SANDER       | 8    |
| FLRMAN                                             |               |                 |      |
| FLRMAN                                             |               |                 |      |
| NO. OF DAYS <b>4</b> SINCE LAST LOST TIME ACCIDENT |               |                 |      |



|                                                              |                                |                                                             |                                 |
|--------------------------------------------------------------|--------------------------------|-------------------------------------------------------------|---------------------------------|
| LEASE<br>PACIFIC AMOCO ALEXANDRA                             | WELL NO.<br>0-54               | API WELL NUMBER<br>054-60-30-W-117-45-W                     | DATE<br>7-3-73                  |
| OPERATOR<br>PACIFIC PETROLEUMS LTD.                          | CONTRACTOR<br>KENTING PETROLIA |                                                             | RIG NO.<br>9                    |
| SIGNATURE OF OPERATOR'S REPRESENTATIVE<br><i>[Signature]</i> |                                | SIGNATURE OF CONTRACTOR'S TOOL PUSHER<br><i>[Signature]</i> |                                 |
| D.P. SIZE<br>4 1/2                                           | WT./FT.<br>16.60               | GRADE<br>3                                                  | TOOL JT. Q.D.<br>5 7/8          |
| TYPE THREAD<br>F.H.                                          | STRING NO.<br>1                | PUMP NO.<br>1                                               | PUMP MANUFACTURER<br>CONT EMSCO |
| TYPE<br>D-300                                                |                                | STROKE LENGTH<br>14"                                        |                                 |

LEGAL LAND DESCRIPTION

0-54-60-30-W-117-45-W

WIRE LINE RECORD

REEL NO. 4

|                                 |              |                             |                  |             |                         |        |
|---------------------------------|--------------|-----------------------------|------------------|-------------|-------------------------|--------|
| SIZE<br>8 5/8"                  | MAKE<br>ST3C | WT. & GR.<br>24KS           | NO. JOINTS<br>12 | FEET<br>486 | RKB. TO CSG. HD.<br>483 | SET AT |
| FT. CUT OFF                     |              | PRESENT LENGTH              |                  |             |                         |        |
| TON MI. OR TRIPS SINCE LAST CUT |              | CUMULATIVE TON MI. OR TRIPS |                  |             |                         |        |

DRILLING CREW PAYROLL DATA

DATE 7-3-73

WELL NAME &amp; NO. PACIFIC AMOCO ALEXANDRA 0-54

COMPANY KENTING PETROLIA

TOOL PUSHER N. SNYDER

RIG NO. 9

| TIME DISTRIBUTION - HOURS    |           |       |     | DRILLING ASSEMBLY (At end of tour) |               | BIT RECORD |                     | MUD RECORD |        |
|------------------------------|-----------|-------|-----|------------------------------------|---------------|------------|---------------------|------------|--------|
| CODE NO.                     | OPERATION | MORN. | DAY | EVE.                               | BIT           | FT.        | BIT NO.             | TIME       | WEIGHT |
| 1. RIG UP AND TEAR DOWN      |           |       |     |                                    | STB RMR       | OD         | FT. MFG.            | 9.2        | 9.2    |
| 2. DRILL ACTUAL              |           |       |     |                                    | D.C. ID       | OD         | FT. TYPE            | 65         | 80     |
| 3. REAMING                   |           |       |     |                                    | STB RMR       | OD         | FT. JETS 1/32"      |            |        |
| 4. COCKING                   |           |       |     |                                    | D.C. ID       | OD         | FT. SER. NO.        |            |        |
| 5. CONDITION MUD & CIRCULATE | 2 1/4     |       |     |                                    | STB RMR       | OD         | FT. DEPTH OUT       |            |        |
| 6. TRIPS                     | 2 1/4     |       |     |                                    |               |            | DEPTH IN            |            |        |
| 7. LUBRICATE RIG             |           |       |     |                                    |               |            | TOTAL FTG.          |            |        |
| 8. REPAIR RIG                |           |       |     |                                    |               |            | TOTAL HRS. RUN      |            |        |
| 9. CUT OFF DRILLING LINE     |           |       |     |                                    | STANDS DP     | FT.        | COND. 1/8" T/B GAGE |            |        |
| 10. DEVIATION SURVEY         |           |       |     |                                    | SINGLES DP    | FT.        | GPM/ PD-PSI         |            |        |
| 11. WIRE LINE LOGS           | 3 1/4     |       |     |                                    | KELLY DOWN    | FT.        |                     |            |        |
| 12. RUN CASING & CEMENT      |           |       |     |                                    | TOTAL         | FT.        |                     |            |        |
| 13. WAIT ON CEMENT           |           |       |     |                                    | WT. OF STRING | LBS.       |                     |            |        |
| 14. NIPPLE UP B.O.P.         |           |       |     |                                    |               |            |                     |            |        |

| TIME DISTRIBUTION - HOURS |           |       |     | DRILLING ASSEMBLY (At end of tour) |               | BIT RECORD |                     | MUD RECORD |        |
|---------------------------|-----------|-------|-----|------------------------------------|---------------|------------|---------------------|------------|--------|
| CODE NO.                  | OPERATION | MORN. | DAY | EVE.                               | BIT           | FT.        | BIT NO.             | TIME       | WEIGHT |
| 15. TEST B.O.P.           |           |       |     |                                    | STB RMR       | OD         | FT. MFG.            |            |        |
| 16. DRILL STEM TEST       | 3         |       |     |                                    | D.C. ID       | OD         | FT. TYPE            |            |        |
| 17. PLUG BACK             |           |       |     |                                    | STB RMR       | OD         | FT. JETS 1/32"      |            |        |
| 18. SQUEEZE CEMENT        |           |       |     |                                    | D.C. ID       | OD         | FT. SER. NO.        |            |        |
| 19. FISHING               |           |       |     |                                    | STB RMR       | OD         | FT. DEPTH OUT       |            |        |
| 20. DIR. WORK             |           |       |     |                                    |               |            | DEPTH IN            |            |        |
| 21. W.O.O.                | 1         |       |     |                                    |               |            | TOTAL FTG.          |            |        |
| 22. MAKEUP TEST           | 2         |       |     |                                    |               |            | TOTAL HRS. RUN      |            |        |
| 23.                       |           |       |     |                                    | STANDS DP     | FT.        | COND. 1/8" T/B GAGE |            |        |
| A. PERF'RTN               |           |       |     |                                    | SINGLES DP    | FT.        | GPM/ PD-PSI         |            |        |
| B. TBG TRIPS              |           |       |     |                                    | KELLY DOWN    | FT.        |                     |            |        |
| C. TREATING               |           |       |     |                                    | TOTAL         | FT.        |                     |            |        |
| D. SNABBING               |           |       |     |                                    | WT. OF STRING | LBS.       |                     |            |        |
| E. TESTING                |           |       |     |                                    |               |            |                     |            |        |
| F. ADDIT'L                |           |       |     |                                    |               |            |                     |            |        |
| G.                        |           |       |     |                                    |               |            |                     |            |        |

| TIME DISTRIBUTION - HOURS |           |       |     | DRILLING ASSEMBLY (At end of tour) |               | BIT RECORD |                     | MUD RECORD |        |
|---------------------------|-----------|-------|-----|------------------------------------|---------------|------------|---------------------|------------|--------|
| CODE NO.                  | OPERATION | MORN. | DAY | EVE.                               | BIT           | FT.        | BIT NO.             | TIME       | WEIGHT |
| 24. TOTAL DAY WORK        | 8         |       |     |                                    | STB RMR       | OD         | FT. MFG.            |            |        |
| 25. TOTAL MUD COST        |           |       |     |                                    | D.C. ID       | OD         | FT. TYPE            |            |        |
| 26. TOTAL DAY WORK        |           |       |     |                                    | STB RMR       | OD         | FT. JETS 1/32"      |            |        |
| 27. TOTAL MUD COST        |           |       |     |                                    | D.C. ID       | OD         | FT. SER. NO.        |            |        |
| 28. TOTAL DAY WORK        |           |       |     |                                    | STB RMR       | OD         | FT. DEPTH OUT       |            |        |
| 29. TOTAL MUD COST        |           |       |     |                                    |               |            | DEPTH IN            |            |        |
| 30. TOTAL DAY WORK        |           |       |     |                                    |               |            | TOTAL FTG.          |            |        |
| 31. TOTAL MUD COST        |           |       |     |                                    |               |            | TOTAL HRS. RUN      |            |        |
| 32. TOTAL DAY WORK        |           |       |     |                                    | STANDS DP     | FT.        | COND. 1/8" T/B GAGE |            |        |
| 33. TOTAL MUD COST        |           |       |     |                                    | SINGLES DP    | FT.        | GPM/ PD-PSI         |            |        |
| 34. TOTAL DAY WORK        |           |       |     |                                    | KELLY DOWN    | FT.        |                     |            |        |
| 35. TOTAL MUD COST        |           |       |     |                                    | TOTAL         | FT.        |                     |            |        |
| 36. TOTAL DAY WORK        |           |       |     |                                    | WT. OF STRING | LBS.       |                     |            |        |
| 37. TOTAL MUD COST        |           |       |     |                                    |               |            |                     |            |        |

| FOOTAGE |     | DR. D. RM-R CORE-C | CORE NO. | FORMATION (SHOW CORE RECOVERY) | ROTARY RPM | WT. ON BIT 1000# | PUMP PRESS | PUMP NO. | PUMP NO. | METHOD RUN |
|---------|-----|--------------------|----------|--------------------------------|------------|------------------|------------|----------|----------|------------|
| FROM    | TO  |                    |          |                                |            |                  |            |          |          |            |
| 1200    | 200 |                    |          | CIRC TO LOG.                   |            |                  |            |          |          |            |
| 200     | 415 |                    |          | TRIP OUT TO LOG.               |            |                  |            |          |          |            |
| 415     | 500 |                    |          | RIG TO LOG.                    |            |                  |            |          |          |            |
| 500     | 800 |                    |          | LOG.                           |            |                  |            |          |          |            |

| FOOTAGE |     | DR. D. RM-R CORE-C | CORE NO. | FORMATION (SHOW CORE RECOVERY)                     | ROTARY RPM | WT. ON BIT 1000# | PUMP PRESS | PUMP NO. | PUMP NO. | METHOD RUN |
|---------|-----|--------------------|----------|----------------------------------------------------|------------|------------------|------------|----------|----------|------------|
| FROM    | TO  |                    |          |                                                    |            |                  |            |          |          |            |
| 800     | 400 |                    |          | LOGGED UP SEILUMBER GEE. RAN.                      |            |                  |            |          |          |            |
|         |     |                    |          | DUAL INDUCTION LOG LOG. 2" 485-3890 5" 3000-3890   |            |                  |            |          |          |            |
|         |     |                    |          | FORMATION PEN LOG. 2" 2400-3890 5" 2400-3890       |            |                  |            |          |          |            |
|         |     |                    |          | BOREHOLE COMPENSATED LOG. 2" 485-3880 5" 3000-3880 |            |                  |            |          |          |            |

| FOOTAGE |      | DR. D. RM-R CORE-C | CORE NO. | FORMATION (SHOW CORE RECOVERY) | ROTARY RPM | WT. ON BIT 1000# | PUMP PRESS | PUMP NO. | PUMP NO. | METHOD RUN |
|---------|------|--------------------|----------|--------------------------------|------------|------------------|------------|----------|----------|------------|
| FROM    | TO   |                    |          |                                |            |                  |            |          |          |            |
| 400     | 500  |                    |          | DST #1 3500-3635               |            |                  |            |          |          |            |
| 500     | 700  |                    |          | PREFLOW 5mins                  |            |                  |            |          |          |            |
| 700     | 900  |                    |          | 151 60 mins.                   |            |                  |            |          |          |            |
| 900     | 1200 |                    |          | PSI 90 mins.                   |            |                  |            |          |          |            |

| MORNING TOUR 1200 P.M. 800 A.M. |               |             |      |
|---------------------------------|---------------|-------------|------|
| CREW                            | SOC. SEC. NO. | NAME        | HRS. |
| DRILLER                         |               | C. SANDOOST | 8    |
| DRKMAN                          |               | D. LAUCK    | 8    |
| MTRMAN                          |               | R. THIEL    | 8    |
| FIREMAN                         |               |             |      |
| FLRMAN                          |               | B. DOMEY    | 8    |
| FLRMAN                          |               |             |      |
| FLRMAN                          |               |             |      |

| DAY TOUR 800 A.M. 400 P.M. |               |                  |      |
|----------------------------|---------------|------------------|------|
| CREW                       | SOC. SEC. NO. | NAME             | HRS. |
| DRILLER                    |               | GARRY WOODBRIDGE | 8    |
| DRKMAN                     |               | LEN TOMCZAK      | 8    |
| MTRMAN                     |               | RANDY CRISHAM    | 8    |
| FIREMAN                    |               |                  |      |
| FLRMAN                     |               | VICTOR HOLMES    | 8    |
| FLRMAN                     |               | JIM COCHRAN      | 8    |
| FLRMAN                     |               |                  |      |

| EVENING TOUR 4 P.M. 12 P.M. |               |            |      |
|-----------------------------|---------------|------------|------|
| CREW                        | SOC. SEC. NO. | NAME       | HRS. |
| DRILLER                     |               | L. SANDER  | 8    |
| DRKMAN                      |               | J. FELAND  | 8    |
| MTRMAN                      |               | D. WITTER  | 8    |
| FIREMAN                     |               |            |      |
| FLRMAN                      |               | B. SARMAER | 8    |
| FLRMAN                      |               |            |      |
| FLRMAN                      |               |            |      |



|                                                              |                                |                                                             |                                |
|--------------------------------------------------------------|--------------------------------|-------------------------------------------------------------|--------------------------------|
| LEASE<br>PACIFIC AMOCO ALEXANDRA                             | WELL NO.<br>G-54               | API WELL NUMBER<br>054-60-30-W-117-45-W                     | DATE<br>7-3-73                 |
| OPERATOR<br>PACIFIC PETROLEUMS LTD.                          | CONTRACTOR<br>KENTING PETROLIA |                                                             | RIG NO.<br>9                   |
| SIGNATURE OF OPERATOR'S REPRESENTATIVE<br><i>[Signature]</i> |                                | SIGNATURE OF CONTRACTOR'S TOOL PUSHER<br><i>[Signature]</i> |                                |
| D.P. SIZE<br>4 1/2                                           | WT./FT.<br>16.60               | GRADE<br>3                                                  | TOOL JOINT TYPE<br>5 7/8" F.H. |
| STRING NO.<br>1                                              | PUMP NO.<br>1                  | PUMP MANUFACTURER<br>CONT EMSCO                             | TYPE<br>D-300                  |
| STROKE LENGTH<br>14"                                         |                                |                                                             |                                |

|                                                 |              |                   |                  |             |               |                |                |             |  |                             |  |
|-------------------------------------------------|--------------|-------------------|------------------|-------------|---------------|----------------|----------------|-------------|--|-----------------------------|--|
| LEGAL LAND DESCRIPTION<br>0-54-60-30-W-117-45-W |              |                   |                  |             |               |                |                |             |  | WIRE LINE RECORD REEL NO. 4 |  |
| SIZE<br>8 5/8"                                  | MAKE<br>ST3C | WT. & GR.<br>24KS | NO. JOINTS<br>12 | FEET<br>486 | SET AT<br>483 | SIZE<br>1"     | NO. LINES<br>8 | FT. SLIPPED |  |                             |  |
| FT. CUT OFF                                     |              |                   |                  |             |               | PRESENT LENGTH |                |             |  |                             |  |
| TON MI. OR TRIPS SINCE LAST CUT                 |              |                   |                  |             |               |                |                |             |  |                             |  |
| CUMULATIVE TON MI. OR TRIPS                     |              |                   |                  |             |               |                |                |             |  |                             |  |

|                                             |  |  |  |
|---------------------------------------------|--|--|--|
| DRILLING CREW PAYROLL DATA                  |  |  |  |
| DATE 7-3-73                                 |  |  |  |
| WELL NAME & NO. PACIFIC AMOCO ALEXANDRA 054 |  |  |  |
| COMPANY KENTING PETROLIA                    |  |  |  |
| TOOL PUSHER N. SNYDER RIG NO. 9             |  |  |  |

| TIME DISTRIBUTION - HOURS               |                           |       |     | NO. DRILLING ASSEMBLY (At end of tour) |         | BIT RECORD |      | MUD RECORD |                   |
|-----------------------------------------|---------------------------|-------|-----|----------------------------------------|---------|------------|------|------------|-------------------|
| CODE NO.                                | OPERATION                 | MORN. | DAY | FT.                                    | BIT NO. | SIZE       | TIME | WEIGHT     | PRESSURE GRADIENT |
| 1                                       | RIG UP AND TEAR DOWN      |       |     |                                        |         |            |      |            |                   |
| 2                                       | DRILL ACTUAL              |       |     |                                        |         |            |      |            |                   |
| 3                                       | REAMING                   |       |     |                                        |         |            |      |            |                   |
| 4                                       | CORING                    |       |     |                                        |         |            |      |            |                   |
| 5                                       | CONDITION MUD & CIRCULATE | 2 1/4 | 2   |                                        |         |            |      |            |                   |
| 6                                       | TRIPS                     | 2 1/4 | 2   |                                        |         |            |      |            |                   |
| 7                                       | LUBRICATE RIG             |       |     |                                        |         |            |      |            |                   |
| 8                                       | REPAIR RIG                |       |     |                                        |         |            |      |            |                   |
| 9                                       | CUT OFF DRILLING LINE     |       |     |                                        |         |            |      |            |                   |
| 10                                      | DEVIATION SURVEY          |       |     |                                        |         |            |      |            |                   |
| 11                                      | WIRE LINE LOGS            | 3 3/4 | 8   |                                        |         |            |      |            |                   |
| 12                                      | RUN CASING & CEMENT       |       |     |                                        |         |            |      |            |                   |
| 13                                      | WAIT ON CEMENT            |       |     |                                        |         |            |      |            |                   |
| 14                                      | NIPPLE UP B.O.P.          |       |     |                                        |         |            |      |            |                   |
| 15                                      | TEST B.O.P.               |       |     |                                        |         |            |      |            |                   |
| 16                                      | DRILL STEM TEST           |       |     |                                        |         |            |      |            |                   |
| 17                                      | PLUG BACK                 |       |     |                                        |         |            |      |            |                   |
| 18                                      | SQUEEZE CEMENT            |       |     |                                        |         |            |      |            |                   |
| 19                                      | FISHING                   |       |     |                                        |         |            |      |            |                   |
| 20                                      | DIR. WORK                 |       |     |                                        |         |            |      |            |                   |
| 21                                      | W.O.O.                    |       |     |                                        |         |            |      |            |                   |
| 22                                      | MARKUP TEST               |       |     |                                        |         |            |      |            |                   |
| 23                                      | COMPLETION                |       |     |                                        |         |            |      |            |                   |
| TOTALS                                  |                           |       |     |                                        |         |            |      |            |                   |
| DAY WORK TIME SUMMARY (OFFICE USE ONLY) |                           |       |     |                                        |         |            |      |            |                   |
| HRS. W/CONTR. D.P.                      |                           |       |     |                                        |         |            |      |            |                   |
| HRS. W/OPR. D.P.                        |                           |       |     |                                        |         |            |      |            |                   |
| HRS. W/D.P.                             |                           |       |     |                                        |         |            |      |            |                   |
| HRS. STANDBY                            |                           |       |     |                                        |         |            |      |            |                   |
| TOTAL DAY WORK                          |                           |       |     |                                        |         |            |      |            |                   |
| NO. OF DAYS FROM SPUD                   |                           |       |     |                                        |         |            |      |            |                   |
| CUMULATIVE ROTATING HRS.                |                           |       |     |                                        |         |            |      |            |                   |
| TOTAL MUD COST                          |                           |       |     |                                        |         |            |      |            |                   |

| FOOTAGE          |     | DR. D. RM-R CORE-C | COKE NO. | FORMATION (SHOW CORE RECOVERY)                |  | ROTARY RPM | WT. ON BIT 1000* | PUMP PRESS | PUMP NO. | PUMP NO. | METHOD RUN |
|------------------|-----|--------------------|----------|-----------------------------------------------|--|------------|------------------|------------|----------|----------|------------|
| FROM             | TO  |                    |          |                                               |  |            |                  |            |          |          |            |
| DEVIATION RECORD |     |                    |          |                                               |  |            |                  |            |          |          |            |
| TIME LOG         |     |                    |          |                                               |  |            |                  |            |          |          |            |
| FROM             | TO  | ELAPSED TIME       | CODE NO. | DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS |  |            |                  |            |          |          |            |
| 1200             | 200 | 2                  |          | CIRC TO LOG.                                  |  |            |                  |            |          |          |            |
| 200              | 215 | 2 1/4              |          | TRIP OUT TO LOG.                              |  |            |                  |            |          |          |            |
| 415              | 500 | 3/4                |          | RIG TO LOG.                                   |  |            |                  |            |          |          |            |
| 500              | 800 | 3                  |          | LOG.                                          |  |            |                  |            |          |          |            |

| MORNING TOUR 1200 P.M. 800 A.M. |               |               |      |
|---------------------------------|---------------|---------------|------|
| CREW                            | SOC. SEC. NO. | NAME          | HRS. |
| DRILLER                         |               | C. SANDOQUIST | 8    |
| DRKMAN                          |               | D. LAUCK      | 8    |
| MTRMAN                          |               | R. THIEL      | 8    |
| FIREMAN                         |               |               |      |
| FLRMAN                          |               | B. DOMEY      | 8    |
| FLRMAN                          |               |               |      |
| FLRMAN                          |               |               |      |

| NO. DRILLING ASSEMBLY (At end of tour) |     | BIT RECORD |            | MUD RECORD |        |
|----------------------------------------|-----|------------|------------|------------|--------|
| BIT                                    | FT. | BIT NO.    | SIZE       | TIME       | WEIGHT |
| STB RMR                                | OD  | FT.        | MFG.       |            |        |
| D.C. ID                                | OD  | FT.        | TYPE       |            |        |
| STB RMR                                | OD  | FT.        | JETS 1/32" |            |        |
| D.C. ID                                | OD  | FT.        | SER. NO.   |            |        |
| STB RMR                                | OD  | FT.        | DEPTH OUT  |            |        |
| DEPTH IN                               |     |            |            |            |        |
| TOTAL FTG.                             |     |            |            |            |        |
| TOTAL HRS. RUN                         |     |            |            |            |        |
| COND. 1/8" T/B GAGE                    |     |            |            |            |        |
| GPM/ PD-PSI                            |     |            |            |            |        |
| KELLY DOWN                             |     |            |            |            |        |
| TOTAL                                  |     |            |            |            |        |
| WT. OF STRING                          |     |            |            |            |        |

| FOOTAGE                                           |     | DR. D. RM-R CORE-C | COKE NO. | FORMATION (SHOW CORE RECOVERY)                |  | ROTARY RPM | WT. ON BIT 1000* | PUMP PRESS | PUMP NO. | PUMP NO. | METHOD RUN |
|---------------------------------------------------|-----|--------------------|----------|-----------------------------------------------|--|------------|------------------|------------|----------|----------|------------|
| FROM                                              | TO  |                    |          |                                               |  |            |                  |            |          |          |            |
| DEVIATION RECORD                                  |     |                    |          |                                               |  |            |                  |            |          |          |            |
| TIME LOG                                          |     |                    |          |                                               |  |            |                  |            |          |          |            |
| FROM                                              | TO  | ELAPSED TIME       | CODE NO. | DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS |  |            |                  |            |          |          |            |
| 800                                               | 400 | 8                  |          | LOGGED BY SANDOQUIST RAN.                     |  |            |                  |            |          |          |            |
| DUAL INDUCTION LOG LOG 2" 485-3890 5" 3000-3890   |     |                    |          |                                               |  |            |                  |            |          |          |            |
| FORMATION DEN LOG 2" 2400-3890 5" 2400-3890       |     |                    |          |                                               |  |            |                  |            |          |          |            |
| BOREHOLE COMPENSATED LOG 2" 485-3890 5" 3000-3890 |     |                    |          |                                               |  |            |                  |            |          |          |            |

| DAY TOUR 800 A.M. 400 P.M. |               |                  |      |
|----------------------------|---------------|------------------|------|
| CREW                       | SOC. SEC. NO. | NAME             | HRS. |
| DRILLER                    |               | GARRY WOODBRIDGE | 8    |
| DRKMAN                     |               | LEE TOMCZAK      | 8    |
| MTRMAN                     |               | RANDY CHISHOLM   | 8    |
| FIREMAN                    |               |                  |      |
| FLRMAN                     |               | VICTOR HOLMES    | 8    |
| FLRMAN                     |               | JIM COCHRAN      | 8    |
| FLRMAN                     |               |                  |      |

| NO. DRILLING ASSEMBLY (At end of tour) |     | BIT RECORD |            | MUD RECORD |        |
|----------------------------------------|-----|------------|------------|------------|--------|
| BIT                                    | FT. | BIT NO.    | SIZE       | TIME       | WEIGHT |
| STB RMR                                | OD  | FT.        | MFG.       |            |        |
| D.C. ID                                | OD  | FT.        | TYPE       |            |        |
| STB RMR                                | OD  | FT.        | JETS 1/32" |            |        |
| D.C. ID                                | OD  | FT.        | SER. NO.   |            |        |
| STB RMR                                | OD  | FT.        | DEPTH OUT  |            |        |
| DEPTH IN                               |     |            |            |            |        |
| TOTAL FTG.                             |     |            |            |            |        |
| TOTAL HRS. RUN                         |     |            |            |            |        |
| COND. 1/8" T/B GAGE                    |     |            |            |            |        |
| GPM/ PD-PSI                            |     |            |            |            |        |
| KELLY DOWN                             |     |            |            |            |        |
| TOTAL                                  |     |            |            |            |        |
| WT. OF STRING                          |     |            |            |            |        |

| FOOTAGE          |      | DR. D. RM-R CORE-C | COKE NO. | FORMATION (SHOW CORE RECOVERY)                |  | ROTARY RPM | WT. ON BIT 1000* | PUMP PRESS | PUMP NO. | PUMP NO. | METHOD RUN |
|------------------|------|--------------------|----------|-----------------------------------------------|--|------------|------------------|------------|----------|----------|------------|
| FROM             | TO   |                    |          |                                               |  |            |                  |            |          |          |            |
| DEVIATION RECORD |      |                    |          |                                               |  |            |                  |            |          |          |            |
| TIME LOG         |      |                    |          |                                               |  |            |                  |            |          |          |            |
| FROM             | TO   | ELAPSED TIME       | CODE NO. | DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS |  |            |                  |            |          |          |            |
| 400              | 500  | 1                  |          | DST #1 3500-3635                              |  |            |                  |            |          |          |            |
| 500              | 700  | 2                  |          | PREFLOW 5mins 0.0. 90mins                     |  |            |                  |            |          |          |            |
| 700              | 900  | 2                  |          | ISI 60mins ESI 90mins                         |  |            |                  |            |          |          |            |
| 900              | 1200 | 3                  |          | TRIP IN DST #1 (STRAP)                        |  |            |                  |            |          |          |            |
| RIG TO AND TEST  |      |                    |          |                                               |  |            |                  |            |          |          |            |

| EVENING TOUR 4 P.M. 12 P.M. |               |            |      |
|-----------------------------|---------------|------------|------|
| CREW                        | SOC. SEC. NO. | NAME       | HRS. |
| DRILLER                     |               | L. SANDER  | 8    |
| DRKMAN                      |               | J. FELAND  | 8    |
| MTRMAN                      |               | D. WITTER  | 8    |
| FIREMAN                     |               |            |      |
| FLRMAN                      |               | B. SARMAGA | 8    |
| FLRMAN                      |               |            |      |
| FLRMAN                      |               |            |      |





March 5/73 35-73

|                                                             |                                |                                        |                                 |
|-------------------------------------------------------------|--------------------------------|----------------------------------------|---------------------------------|
| LEASE<br>PRINCE ALFONSO ALEXANDRA                           | WELL NO.<br>0054               | API WELL NUMBER<br>039466038000W17485W | DATE<br>5-3-73                  |
| OPERATOR<br>PRINCE ALFONSO ALEXANDRA LTD                    | CONTRACTOR<br>KENTING PETROLIA | RIG NO.<br>9                           |                                 |
| SIGNATURE OF OPERATOR'S REPRESENTATIVE<br><i>K. M. Lint</i> |                                | SIGNATURE OF CONTRACTOR'S TOOL PUSHER  |                                 |
| D.P. SIZE<br>1 1/2"                                         | WT./FT.<br>16.60               | GRADE<br>3                             | TOOL JT. Q.D.<br>5 1/2" F.H.    |
| TYPE THREAD<br>1                                            | STRING NO.<br>1                | PUMP NO.<br>1                          | PUMP MANUFACTURER<br>CONT EASCO |
| TYPE<br>10-3000                                             | STROKE LENGTH<br>14"           |                                        |                                 |

## LEGAL LAND DESCRIPTION

|                                |             |                 |                   |             |                         |        |                                 |
|--------------------------------|-------------|-----------------|-------------------|-------------|-------------------------|--------|---------------------------------|
| SIZE<br>8 1/2" ST3C            | MAKE<br>JMS | WT. & GR.<br>12 | NO. JOINTS<br>483 | FEET<br>483 | RKB. TO CSG. HD.<br>483 | SET AT | WIRE LINE RECORD<br>REEL NO. 44 |
| FT. CUT OFF                    |             |                 |                   |             |                         |        | PRESENT LENGTH                  |
| TON ML OR TRIPS SINCE LAST CUT |             |                 |                   |             |                         |        |                                 |
| CUMULATIVE TON ML OR TRIPS     |             |                 |                   |             |                         |        |                                 |

| TIME DISTRIBUTION - HOURS |                           |       |     | DRILLING ASSEMBLY (At end of tour) |               | BIT RECORD |                      | MUD RECORD |        |
|---------------------------|---------------------------|-------|-----|------------------------------------|---------------|------------|----------------------|------------|--------|
| CODE NO.                  | OPERATION                 | MORN. | DAY | EVE.                               | BIT           | FT.        | BIT NO.              | TIME       | WEIGHT |
| 1                         | RIG UP AND TEAR DOWN      |       |     |                                    | STB RMR       | OD         | FT. MFG.             | 7 1/2      | 9.2    |
| 2                         | DRILL ACTUAL              |       |     |                                    | D.C. ID       | OD         | FT. TYPE             | 575.47     | 9.2    |
| 3                         | REAMING                   |       |     |                                    | STB RMR       | OD         | FT. JETS 1/32"       | 13/13/13   | 80     |
| 4                         | CORING                    |       |     |                                    | D.C. ID       | OD         | FT. SER. NO.         | 12687      | 40     |
| 5                         | CONDITION MUD & CIRCULATE |       |     |                                    | STB RMR       | OD         | FT. DEPTH OUT        | 3665       |        |
| 6                         | TRIPS                     |       |     |                                    | 1 TELEDRIFT   | 10.05      | DEPTH IN             | 3192       |        |
| 7                         | LUBRICATE RIG             |       |     |                                    | 1 8" Sub      | 1.20       | TOTAL FTG.           | 463        |        |
| 8                         | REPAIR RIG                |       |     |                                    |               |            | TOTAL HRS. RUN       | 23 1/2     |        |
| 9                         | CUT OFF DRILLING LINE     |       |     |                                    | 50 STANDS DP  | 3032       | COND. 1/8" T/BV GAGE |            |        |
| 10                        | DEVIATION SURVEY          |       |     |                                    | 1 SINGLES DP  | 29.81      | GPM/ PD-PSI          |            |        |
| 11                        | WIRE LINE LOGS            |       |     |                                    | KELLY DOWN    | 18.00      |                      |            |        |
| 12                        | RUN CASING                |       |     |                                    | TOTAL         | 3665       |                      |            |        |
| 13                        | WAIT ON CEMENT            |       |     |                                    | WT. OF STRING | 78,000     |                      |            |        |
| 14                        | NIPPLE UP B.O.P.          |       |     |                                    |               |            |                      |            |        |

| TIME DISTRIBUTION - HOURS |                 |       |     | DRILLING ASSEMBLY (At end of tour) |               | BIT RECORD |                      | MUD RECORD |        |
|---------------------------|-----------------|-------|-----|------------------------------------|---------------|------------|----------------------|------------|--------|
| CODE NO.                  | OPERATION       | MORN. | DAY | EVE.                               | BIT           | FT.        | BIT NO.              | TIME       | WEIGHT |
| 15                        | TEST B.O.P.     |       |     |                                    | STB RMR       | OD         | FT. MFG.             | 7 1/2      | 9.2    |
| 16                        | DRILL STEM TEST |       |     |                                    | D.C. ID       | OD         | FT. TYPE             | 575.47     | 9.2    |
| 17                        | PLUG BACK       |       |     |                                    | STB RMR       | OD         | FT. JETS 1/32"       | 13 X 3     | 45     |
| 18                        | SQUEEZE CEMENT  |       |     |                                    | D.C. ID       | OD         | FT. SER. NO.         | 12690      | 45     |
| 19                        | FISHING         |       |     |                                    | STB RMR       | OD         | FT. DEPTH OUT        | 3665       |        |
| 20                        | DIR. WORK       |       |     |                                    | 1 TELEDRIFT   | 10.05      | DEPTH IN             | 3192       |        |
| 21                        |                 |       |     |                                    | 1 C/O Sub     |            | TOTAL FTG.           | 463        |        |
| 22                        |                 |       |     |                                    |               |            | TOTAL HRS. RUN       | 23 1/2     |        |
| 23                        |                 |       |     |                                    | 51 STANDS DP  | 3091.07    | COND. 1/8" T/BV GAGE |            |        |
| 24                        |                 |       |     |                                    | 1 SINGLES DP  |            | GPM/ PD-PSI          |            |        |
| 25                        |                 |       |     |                                    | KELLY DOWN    | 41.00      |                      |            |        |
| 26                        |                 |       |     |                                    | TOTAL         | 3718.75    |                      |            |        |
| 27                        |                 |       |     |                                    | WT. OF STRING | 80,000     |                      |            |        |

| TIME DISTRIBUTION - HOURS |           |       |     | DRILLING ASSEMBLY (At end of tour) |               | BIT RECORD |                      | MUD RECORD |        |
|---------------------------|-----------|-------|-----|------------------------------------|---------------|------------|----------------------|------------|--------|
| CODE NO.                  | OPERATION | MORN. | DAY | EVE.                               | BIT           | FT.        | BIT NO.              | TIME       | WEIGHT |
| 28                        |           |       |     |                                    | STB RMR       | OD         | FT. MFG.             | 7 1/2      | 9.2    |
| 29                        |           |       |     |                                    | D.C. ID       | OD         | FT. TYPE             | 575.47     | 9.2    |
| 30                        |           |       |     |                                    | STB RMR       | OD         | FT. JETS 1/32"       | 13/13/13   | 43     |
| 31                        |           |       |     |                                    | D.C. ID       | OD         | FT. SER. NO.         | 412581     | 50     |
| 32                        |           |       |     |                                    | STB RMR       | OD         | FT. DEPTH OUT        | 3665       | 55     |
| 33                        |           |       |     |                                    | 1 TELEDRIFT   | 10.05      | DEPTH IN             | 3665       |        |
| 34                        |           |       |     |                                    | 1 C/O Sub     | 1.20       | TOTAL FTG.           | 374        |        |
| 35                        |           |       |     |                                    |               |            | TOTAL HRS. RUN       | 13 1/4     |        |
| 36                        |           |       |     |                                    | 13 STANDS DP  | 322.01     | COND. 1/8" T/BV GAGE |            |        |
| 37                        |           |       |     |                                    | 1 SINGLES DP  |            | GPM/ PD-PSI          |            |        |
| 38                        |           |       |     |                                    | KELLY DOWN    | 41.00      |                      |            |        |
| 39                        |           |       |     |                                    | TOTAL         | 3839.84    |                      |            |        |
| 40                        |           |       |     |                                    | WT. OF STRING | 82,000     |                      |            |        |

| TIME DISTRIBUTION - HOURS |           |       |     | DRILLING ASSEMBLY (At end of tour) |               | BIT RECORD |                      | MUD RECORD |        |
|---------------------------|-----------|-------|-----|------------------------------------|---------------|------------|----------------------|------------|--------|
| CODE NO.                  | OPERATION | MORN. | DAY | EVE.                               | BIT           | FT.        | BIT NO.              | TIME       | WEIGHT |
| 41                        |           |       |     |                                    | STB RMR       | OD         | FT. MFG.             | 7 1/2      | 9.2    |
| 42                        |           |       |     |                                    | D.C. ID       | OD         | FT. TYPE             | 575.47     | 9.2    |
| 43                        |           |       |     |                                    | STB RMR       | OD         | FT. JETS 1/32"       | 13/13/13   | 43     |
| 44                        |           |       |     |                                    | D.C. ID       | OD         | FT. SER. NO.         | 412581     | 50     |
| 45                        |           |       |     |                                    | STB RMR       | OD         | FT. DEPTH OUT        | 3665       | 55     |
| 46                        |           |       |     |                                    | 1 TELEDRIFT   | 10.05      | DEPTH IN             | 3665       |        |
| 47                        |           |       |     |                                    | 1 C/O Sub     | 1.20       | TOTAL FTG.           | 374        |        |
| 48                        |           |       |     |                                    |               |            | TOTAL HRS. RUN       | 13 1/4     |        |
| 49                        |           |       |     |                                    | 13 STANDS DP  | 322.01     | COND. 1/8" T/BV GAGE |            |        |
| 50                        |           |       |     |                                    | 1 SINGLES DP  |            | GPM/ PD-PSI          |            |        |
| 51                        |           |       |     |                                    | KELLY DOWN    | 41.00      |                      |            |        |
| 52                        |           |       |     |                                    | TOTAL         | 3839.84    |                      |            |        |
| 53                        |           |       |     |                                    | WT. OF STRING | 82,000     |                      |            |        |

| FOOTAGE          |      | DR. D. RM-R CORE-C | CORE NO. | FORMATION (SHOW CORE RECOVERY)                | ROTARY RPM | WT. ON BIT 1000 | PUMP PRESS | PUMP NO. 1 | PUMP NO. | METHOD RUN |
|------------------|------|--------------------|----------|-----------------------------------------------|------------|-----------------|------------|------------|----------|------------|
| FROM             | TO   |                    |          |                                               |            |                 |            | LINER SIZE | S.P.M.   | SCALES     |
| 3520             | 3665 |                    |          |                                               | 50         | 35              | 800        | 5 1/2      | 60       |            |
| DEVIATION RECORD |      |                    |          |                                               |            |                 |            |            |          |            |
| TIME LOG         |      | DEPTH              | DEV.     | DIRECTION                                     | DEPTH      | DEV.            | DIRECTION  | DEPTH      | DEV.     | DIRECTION  |
| FROM             | TO   | ELAPSED TIME       | CODE NO. | DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS |            |                 |            |            |          |            |
| 1200             | 630  | 6 1/2              |          | DRLG.                                         |            |                 |            |            |          |            |
| 630              | 645  | 1 1/4              |          | Survey @ 3665 1/2                             |            |                 |            |            |          |            |
| 645              | 800  | 1 1/4              |          | Trip out BIT #4.                              |            |                 |            |            |          |            |

| FOOTAGE          |      | DR. D. RM-R CORE-C | CORE NO. | FORMATION (SHOW CORE RECOVERY)                | ROTARY RPM | WT. ON BIT 1000 | PUMP PRESS | PUMP NO. 1 | PUMP NO. | METHOD RUN |
|------------------|------|--------------------|----------|-----------------------------------------------|------------|-----------------|------------|------------|----------|------------|
| FROM             | TO   |                    |          |                                               |            |                 |            | LINER SIZE | S.P.M.   | SCALES     |
| 3665             | 3718 |                    |          |                                               | 50         | 35              | 800        | 5 1/2      | 60       |            |
| DEVIATION RECORD |      |                    |          |                                               |            |                 |            |            |          |            |
| TIME LOG         |      | DEPTH              | DEV.     | DIRECTION                                     | DEPTH      | DEV.            | DIRECTION  | DEPTH      | DEV.     | DIRECTION  |
| FROM             | TO   | ELAPSED TIME       | CODE NO. | DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS |            |                 |            |            |          |            |
| 800              | 1130 | 3 1/2              |          | TRIP FOR BIT #4                               |            |                 |            |            |          |            |
| 1130             | 1200 | 1 1/2              |          | BREAK CIRE + BEAM TO BOTTOM                   |            |                 |            |            |          |            |
| 1200             | 400  | 4                  |          | DRILL                                         |            |                 |            |            |          |            |

| FOOTAGE          |      | DR. D. RM-R CORE-C | CORE NO. | FORMATION (SHOW CORE RECOVERY)                | ROTARY RPM | WT. ON BIT 1000 | PUMP PRESS | PUMP NO. 1 | PUMP NO. | METHOD RUN |
|------------------|------|--------------------|----------|-----------------------------------------------|------------|-----------------|------------|------------|----------|------------|
| FROM             | TO   |                    |          |                                               |            |                 |            | LINER SIZE | S.P.M.   | SCALES     |
| 3718             | 3839 |                    |          |                                               | 45         | 35              | 800        | 5 1/2      | 60       |            |
| DEVIATION RECORD |      |                    |          |                                               |            |                 |            |            |          |            |
| TIME LOG         |      | DEPTH              | DEV.     | DIRECTION                                     | DEPTH      | DEV.            | DIRECTION  | DEPTH      | DEV.     | DIRECTION  |
| FROM             | TO   | ELAPSED TIME       | CODE NO. | DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS |            |                 |            |            |          |            |
| 400              | 900  | 4                  |          | DRLG                                          |            |                 |            |            |          |            |
| 900              | 815  | 1 1/4              |          | RIG SERVICE AND B.O.P. CHECK OK               |            |                 |            |            |          |            |
| 815              | 1200 | 3 3/4              |          | DRLG                                          |            |                 |            |            |          |            |

## DRILLING CREW PAYROLL DATA

|                 |                               |
|-----------------|-------------------------------|
| DATE            | 5-3-73                        |
| WELL NAME & NO. | PRINCE ALFONSO ALEXANDRA 0054 |
| COMPANY         | KENTING PETROLIA              |
| TOOL PUSHER     | N. SANDER                     |
| RIG NO.         | 9                             |

| MORNING TOUR |               |               |      | P.M. |               |      |      | A.M. |               |      |      |
|--------------|---------------|---------------|------|------|---------------|------|------|------|---------------|------|------|
| CREW         | SOC. SEC. NO. | NAME          | HRS. | CREW | SOC. SEC. NO. | NAME | HRS. | CREW | SOC. SEC. NO. | NAME | HRS. |
| DRILLER      |               | P. SANDOQUIST | 8    |      |               |      |      |      |               |      |      |
| DRKMAN       |               | D. LAUCK      | 8    |      |               |      |      |      |               |      |      |
| MTRMAN       |               | R. THIEL      | 8    |      |               |      |      |      |               |      |      |
| FIREMAN      |               |               |      |      |               |      |      |      |               |      |      |
| FLRMAN       |               | B. DOMEY      | 8    |      |               |      |      |      |               |      |      |
| FLRMAN       |               |               |      |      |               |      |      |      |               |      |      |
| FLRMAN       |               |               |      |      |               |      |      |      |               |      |      |

| DAY TOUR |               |                 |      | P.M. |               |      |      | A.M. |               |      |      |
|----------|---------------|-----------------|------|------|---------------|------|------|------|---------------|------|------|
| CREW     | SOC. SEC. NO. | NAME            | HRS. | CREW | SOC. SEC. NO. | NAME | HRS. | CREW | SOC. SEC. NO. | NAME | HRS. |
| DRILLER  |               | GARRY WOODRIDGE | 8    |      |               |      |      |      |               |      |      |
| DRKMAN   |               | LEO TOMCZAK     | 8    |      |               |      |      |      |               |      |      |
| MTRMAN   |               | RANDY CHISHOLM  | 8    |      |               |      |      |      |               |      |      |
| FIREMAN  |               |                 |      |      |               |      |      |      |               |      |      |
| FLRMAN   |               | VICTOR HOLMES   | 8    |      |               |      |      |      |               |      |      |
| FLRMAN   |               |                 |      |      |               |      |      |      |               |      |      |
| FLRMAN   |               |                 |      |      |               |      |      |      |               |      |      |

| EVENING TOUR |               |            |      | P.M. |               |      |      | A.M. |               |      |      |
|--------------|---------------|------------|------|------|---------------|------|------|------|---------------|------|------|
| CREW         | SOC. SEC. NO. | NAME       | HRS. | CREW | SOC. SEC. NO. | NAME | HRS. | CREW | SOC. SEC. NO. | NAME | HRS. |
| DRILLER      |               | J. SANDER  | 8    |      |               |      |      |      |               |      |      |
| DRKMAN       |               | J. FELAND  | 8    |      |               |      |      |      |               |      |      |
| MTRMAN       |               | D. WITTER  | 8    |      |               |      |      |      |               |      |      |
| FIREMAN      |               |            |      |      |               |      |      |      |               |      |      |
| FLRMAN       |               | G. SAMPAGA | 8    |      |               |      |      |      |               |      |      |
| FLRMAN       |               | J. COCHRAN | 8    |      |               |      |      |      |               |      |      |
| FLRMAN       |               |            |      |      |               |      |      |      |               |      |      |







## DAILY DRILLING REPORT

REPORT NO. 8

March 2

|                                                                 |                                |                                                                |                                 |
|-----------------------------------------------------------------|--------------------------------|----------------------------------------------------------------|---------------------------------|
| LEASE<br>PACIFIC AMOCO ALEXANDRA                                | WELL NO.<br>054                | API WELL NUMBER<br>054-60-30-N117-45-W                         | DATE<br>3-2-73                  |
| OPERATOR<br>PACIFIC PETROLEUMS LTD.                             | CONTRACTOR<br>KENTING PETROLIA |                                                                | RIG NO.<br>9                    |
| SIGNATURE OF OPERATOR'S REPRESENTATIVE<br><i>R. L. Tompkins</i> |                                | SIGNATURE OF CONTRACTOR'S TOOL PUSHER<br><i>N. L. Tompkins</i> |                                 |
| D.P. SIZE<br>4 1/2                                              | WT./FT.<br>16.6                | GRADE<br>3                                                     | TOOL JT. Q.D.<br>5 7/8          |
| TYPE THREAD<br>E.H.                                             | STRING NO.<br>1                | PUMP NO.<br>1                                                  | PUMP MANUFACTURER<br>COST Emsco |
| TYPE<br>D-300                                                   |                                | STROKE LENGTH<br>14                                            |                                 |

LEGAL LAND DESCRIPTION

054-60-30-N117-45-W

WIRE LINE RECORD REEL NO. 4

|                             |              |                    |                  |                                      |                         |        |
|-----------------------------|--------------|--------------------|------------------|--------------------------------------|-------------------------|--------|
| SIZE<br>8 7/8               | MAKE<br>ST3C | WT. & GR.<br>24 KS | NO. JOINTS<br>12 | FEET<br>486                          | RKB. TO CSG. HZ.<br>483 | SET AT |
| FT. CUT OFF                 |              | PRESENT LENGTH     |                  | TON MI. OR TRIPS SINCE LAST CUT<br>1 |                         |        |
| CUMULATIVE TON MI. OR TRIPS |              |                    |                  |                                      |                         |        |

## DRILLING CREW PAYROLL DATA

DATE 3-2-73

WELL NAME &amp; NO. PACIFIC AMOCO ALEXANDRA 054

COMPANY KENTING PETROLIA

TOOL PUSHER N. Tompkins

RIG NO. 9

| TIME DISTRIBUTION - HOURS               |           |       |     | DRILLING ASSEMBLY (At end of tour) |     | BIT RECORD |      | MUD RECORD |                   |
|-----------------------------------------|-----------|-------|-----|------------------------------------|-----|------------|------|------------|-------------------|
| CODE NO.                                | OPERATION | MORN. | DAY | BIT                                | FT. | BIT NO.    | TIME | WEIGHT     | PRESSURE GRADIENT |
| 1. RIG UP AND TEAR DOWN                 |           |       |     |                                    |     |            |      |            |                   |
| 2. DRILL ACTUAL                         | 8 7/8     |       |     |                                    |     |            |      |            |                   |
| 3. REAMING                              |           |       |     |                                    |     |            |      |            |                   |
| 4. CORING                               |           |       |     |                                    |     |            |      |            |                   |
| 5. CONDITION MUD & CIRCULATE            |           |       |     |                                    |     |            |      |            |                   |
| 6. TRIPS                                |           |       |     |                                    |     |            |      |            |                   |
| 7. LUBRICATE RIG                        | 1/4       |       |     |                                    |     |            |      |            |                   |
| 8. REPAIR RIG                           |           |       |     |                                    |     |            |      |            |                   |
| 9. CUT OFF DRILLING LINE                |           |       |     |                                    |     |            |      |            |                   |
| 10. DEVIATION SURVEY                    |           |       |     |                                    |     |            |      |            |                   |
| 11. WIRE LINE LOGS                      |           |       |     |                                    |     |            |      |            |                   |
| 12. RUN CASING & CEMENT                 |           |       |     |                                    |     |            |      |            |                   |
| 13. WAIT ON CEMENT                      |           |       |     |                                    |     |            |      |            |                   |
| 14. NIPPLE UP B.O.P.                    |           |       |     |                                    |     |            |      |            |                   |
| 15. TEST B.O.P.                         |           |       |     |                                    |     |            |      |            |                   |
| 16. DRILL STEM TEST                     |           |       |     |                                    |     |            |      |            |                   |
| 17. PLUG BACK                           |           |       |     |                                    |     |            |      |            |                   |
| 18. SQUEEZE CEMENT                      |           |       |     |                                    |     |            |      |            |                   |
| 19. FISHING                             |           |       |     |                                    |     |            |      |            |                   |
| 20. DIR. WORK                           |           |       |     |                                    |     |            |      |            |                   |
| 21.                                     |           |       |     |                                    |     |            |      |            |                   |
| 22.                                     |           |       |     |                                    |     |            |      |            |                   |
| COMPLETION                              |           |       |     | DRILLING ASSEMBLY (At end of tour) |     | BIT RECORD |      | MUD RECORD |                   |
| A. PERFORATION                          |           |       |     |                                    |     |            |      |            |                   |
| B. TBC TRIPS                            |           |       |     |                                    |     |            |      |            |                   |
| C. TREATING                             |           |       |     |                                    |     |            |      |            |                   |
| D. SWABBING                             |           |       |     |                                    |     |            |      |            |                   |
| E. TESTING                              |           |       |     |                                    |     |            |      |            |                   |
| F. ADDITIONAL                           |           |       |     |                                    |     |            |      |            |                   |
| G.                                      |           |       |     |                                    |     |            |      |            |                   |
| TOTALS                                  |           |       |     | DRILLING ASSEMBLY (At end of tour) |     | BIT RECORD |      | MUD RECORD |                   |
| DAY WORK TIME SUMMARY (OFFICE USE ONLY) |           |       |     |                                    |     |            |      |            |                   |
| HRS. W/CONTR. D.P.                      |           |       |     |                                    |     |            |      |            |                   |
| HRS. W/OPR. D.P.                        |           |       |     |                                    |     |            |      |            |                   |
| HRS. W/D.P.                             |           |       |     |                                    |     |            |      |            |                   |
| HRS. STANDBY                            |           |       |     |                                    |     |            |      |            |                   |
| TOTAL DAY WORK                          |           |       |     |                                    |     |            |      |            |                   |
| NO. OF DAYS FROM SPUD                   |           |       |     |                                    |     |            |      |            |                   |
| CUMULATIVE ROTATING HRS.                |           |       |     |                                    |     |            |      |            |                   |
| TOTAL MUD COST                          |           |       |     |                                    |     |            |      |            |                   |

| FOOTAGE          |      | DR-D         | CORE NO. | FORMATION (SHOW CORE RECOVERY) |      | ROTARY RPM                                                    | WT. ON BIT 1000 | PUMP PRESS | PUMP NO. 1 | PUMP NO. | METHOD RUN |
|------------------|------|--------------|----------|--------------------------------|------|---------------------------------------------------------------|-----------------|------------|------------|----------|------------|
| FROM             | TO   | RM-R         | NO.      | DEPTH                          | DEV. | DEPTH                                                         | DEV.            | DEPTH      | DEV.       | DEPTH    | DEV.       |
| 1810             | 2048 | D            |          |                                |      | 90                                                            | 35              | 800        | 5 1/2      | 60       | S          |
| DEVIATION RECORD |      | DEPTH        |          | DEV.                           |      | DIRECTION                                                     |                 | DEPTH      |            | DEV.     |            |
| 1928             |      | 1/2          |          | 2048                           |      | 1°                                                            |                 |            |            |          |            |
| TIME LOG         |      | ELAPSED TIME |          | CODE NO.                       |      | DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS                 |                 |            |            |          |            |
| 1200             |      | 800          |          | 8                              |      | DALE                                                          |                 |            |            |          |            |
| FOOTAGE          |      | DR-D         | CORE NO. | FORMATION (SHOW CORE RECOVERY) |      | ROTARY RPM                                                    | WT. ON BIT 1000 | PUMP PRESS | PUMP NO. 1 | PUMP NO. | METHOD RUN |
| 2048             | 2280 |              |          |                                |      | 90                                                            | 35              | 800        | 5 1/2      | 60       | S          |
| DEVIATION RECORD |      | DEPTH        |          | DEV.                           |      | DIRECTION                                                     |                 | DEPTH      |            | DEV.     |            |
| 2260             |      | 1/2          |          |                                |      |                                                               |                 |            |            |          |            |
| TIME LOG         |      | ELAPSED TIME |          | CODE NO.                       |      | DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS                 |                 |            |            |          |            |
| 800              |      | 815          |          | 1/4                            |      | RIG SERVICE + B.O.P. CHECK                                    |                 |            |            |          |            |
| 815              |      | 400          |          | 7 3/4                          |      | DRILL                                                         |                 |            |            |          |            |
|                  |      |              |          |                                |      | DRIVE BEI SERVICE MAN TO MAY RIVER SHIPPO                     |                 |            |            |          |            |
|                  |      |              |          |                                |      | GOVERNMENT SAMPLES FROM (N-12) TO INSTITUTE SED. & PET. GEOL. |                 |            |            |          |            |
|                  |      |              |          |                                |      | CALGARY                                                       |                 |            |            |          |            |
|                  |      |              |          |                                |      | MAGNET TO McCULLOUGH HIGH LEVEL ATA                           |                 |            |            |          |            |
|                  |      |              |          |                                |      | RETURNED VIA BUS PICKUP R.M.T.                                |                 |            |            |          |            |
| FOOTAGE          |      | DR-D         | CORE NO. | FORMATION (SHOW CORE RECOVERY) |      | ROTARY RPM                                                    | WT. ON BIT 1000 | PUMP PRESS | PUMP NO. 1 | PUMP NO. | METHOD RUN |
| 2280             | 2408 |              |          |                                |      | 90                                                            | 35              | 800        | 5 1/2      | 60       | S          |
| DEVIATION RECORD |      | DEPTH        |          | DEV.                           |      | DIRECTION                                                     |                 | DEPTH      |            | DEV.     |            |
| 2400             |      | 1/2          |          |                                |      |                                                               |                 |            |            |          |            |
| TIME LOG         |      | ELAPSED TIME |          | CODE NO.                       |      | DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS                 |                 |            |            |          |            |
| 400              |      | 800          |          | 4                              |      | DRILL                                                         |                 |            |            |          |            |
| 800              |      | 11:30        |          | 3 1/2                          |      | TRIP FOR BIT + SERVICE TELE DRIFT                             |                 |            |            |          |            |
| 11:30            |      | 12:00        |          | 1/2                            |      | BREAK CIRC + RETURN TO BOTTOM 12'                             |                 |            |            |          |            |
|                  |      |              |          |                                |      | Clear                                                         |                 |            |            |          |            |
| FOOTAGE          |      | DR-D         | CORE NO. | FORMATION (SHOW CORE RECOVERY) |      | ROTARY RPM                                                    | WT. ON BIT 1000 | PUMP PRESS | PUMP NO. 1 | PUMP NO. | METHOD RUN |
| 2408             | 2408 |              |          |                                |      |                                                               |                 |            |            |          |            |
| DEVIATION RECORD |      | DEPTH        |          | DEV.                           |      | DIRECTION                                                     |                 | DEPTH      |            | DEV.     |            |
|                  |      |              |          |                                |      |                                                               |                 |            |            |          |            |
| TIME LOG         |      | ELAPSED TIME |          | CODE NO.                       |      | DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS                 |                 |            |            |          |            |
|                  |      |              |          |                                |      |                                                               |                 |            |            |          |            |
| FOOTAGE          |      | DR-D         | CORE NO. | FORMATION (SHOW CORE RECOVERY) |      | ROTARY RPM                                                    | WT. ON BIT 1000 | PUMP PRESS | PUMP NO. 1 | PUMP NO. | METHOD RUN |
| 2408             | 2408 |              |          |                                |      |                                                               |                 |            |            |          |            |
| DEVIATION RECORD |      | DEPTH        |          | DEV.                           |      | DIRECTION                                                     |                 | DEPTH      |            | DEV.     |            |
|                  |      |              |          |                                |      |                                                               |                 |            |            |          |            |
| TIME LOG         |      | ELAPSED TIME |          | CODE NO.                       |      | DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS                 |                 |            |            |          |            |
|                  |      |              |          |                                |      |                                                               |                 |            |            |          |            |

| MORNING TOUR 12 P.M. 8 A.M.               |               |                  |      |
|-------------------------------------------|---------------|------------------|------|
| CREW                                      | SOC. SEC. NO. | NAME             | HRS. |
| DRILLER                                   |               | L. SANDER        | 8    |
| DRKMAN                                    |               | J. FELAND        | 8    |
| MTRMAN                                    |               | D. WITTER        | 8    |
| FIREMAN                                   |               |                  |      |
| FLRMAN                                    |               | B. SPARMAN       | 8    |
| FLRMAN                                    |               |                  |      |
| FLRMAN                                    |               |                  |      |
| NO. OF DAYS SINCE LAST LOST TIME ACCIDENT |               |                  |      |
| DAY TOUR 8 A.M. 4 P.M.                    |               |                  |      |
| CREW                                      | SOC. SEC. NO. | NAME             | HRS. |
| DRILLER                                   |               | C. SANDQUIST     | 8    |
| DRKMAN                                    |               | D. LAUCK         | 8    |
| MTRMAN                                    |               | R. THIEL         | 8    |
| FIREMAN                                   |               |                  |      |
| FLRMAN                                    |               | B. DOMEY         | 8    |
| FLRMAN                                    |               |                  |      |
| FLRMAN                                    |               |                  |      |
| NO. OF DAYS SINCE LAST LOST TIME ACCIDENT |               |                  |      |
| EVENING TOUR P.M. P.M.                    |               |                  |      |
| CREW                                      | SOC. SEC. NO. | NAME             | HRS. |
| DRILLER                                   |               | GARRY WOOLDRIDGE | 8    |
| DRKMAN                                    |               | LEO TOMCZAK      | 8    |
| MTRMAN                                    |               | BANDY CRISHOLM   | 8    |
| FIREMAN                                   |               |                  |      |
| FLRMAN                                    |               | VICTOR HOLMES    | 8    |
| FLRMAN                                    |               |                  |      |
| FLRMAN                                    |               |                  |      |
| NO. OF DAYS SINCE LAST LOST TIME ACCIDENT |               |                  |      |









|                                                              |                                 |                                                                |                               |
|--------------------------------------------------------------|---------------------------------|----------------------------------------------------------------|-------------------------------|
| LEASE<br>PACIFIC AMOCO ALEXANDRA 054                         | WELL NO.<br>054-60-30-N117-45-W | API WELL NUMBER<br>054-60-30-N117-45-W                         | DATE<br>2-26-73               |
| OPERATOR<br>PACIFIC PETROLEUMS LTD.                          | CONTRACTOR<br>KENTING PETROLIA  |                                                                | RIG NO.<br>9                  |
| SIGNATURE OF OPERATOR'S REPRESENTATIVE<br><i>R. L. Latta</i> |                                 | SIGNATURE OF CONTRACTOR'S TOOL PUSHER<br><i>M. L. Tompkins</i> |                               |
| D.P. SIZE<br>4 1/2                                           | WT./FT.<br>16.60                | GRADE<br>3                                                     | TOOL JOINT TYPE<br>5 1/2 F.H. |
| STRING NO.<br>1                                              | PUMP NO.<br>1                   | PUMP MANUFACTURER<br>CONT Emeco                                | TYPE<br>D-300                 |
| STROKE LENGTH<br>14                                          |                                 |                                                                |                               |

|                                               |                                |
|-----------------------------------------------|--------------------------------|
| LEGAL LAND DESCRIPTION<br>054-60-30-N117-45-W | WIRE LINE RECORD<br>REEL NO. 4 |
| SIZE<br>1                                     | NO. LINES<br>8                 |
| FT. CUT OFF                                   | PRESENT LENGTH                 |
| TON MI. OR TRIPS<br>SINCE LAST CUT            |                                |
| CUMULATIVE<br>TON MI. OR TRIPS                |                                |

## DRILLING CREW PAYROLL DATA

DATE 2-26-73

WELL NAME &amp; NO. PACIFIC AMOCO ALEXANDRA

COMPANY KENTING PETROLIA

TOOL PUSHER M. L. Tompkins RIG NO. 9

| TIME DISTRIBUTION - HOURS               |                           |       |     | DRILLING ASSEMBLY (At end of tour) |         | BIT RECORD |               | MUD RECORD |        |
|-----------------------------------------|---------------------------|-------|-----|------------------------------------|---------|------------|---------------|------------|--------|
| CODE NO.                                | OPERATION                 | MORN. | DAY | EVE.                               | NO.     | FT.        | BIT NO.       | TIME       | WEIGHT |
| 1                                       | RIG UP AND TEAR DOWN      |       |     |                                    | 1       | 1.00       | 12 1/4        | 9.0        | 9.0    |
| 2                                       | DRILL ACTUAL              |       |     |                                    | 1       | 5.80       | H.W.          |            |        |
| 3                                       | REAMING                   | 3 3/4 |     |                                    | 15      | 428.94     | Y.6           | 65         | 70     |
| 4                                       | CORING                    |       |     |                                    | 1       | 1.00       | 12 1/4        |            |        |
| 5                                       | CONDITION MUD & CIRCULATE | 1 1/2 |     |                                    | 1       | 1.20       | 483           |            |        |
| 6                                       | TRIPS                     | 1 1/4 |     |                                    | 1       | 1.10       | 210           |            |        |
| 7                                       | LUBRICATE RIG             |       |     |                                    | 1       | 4.60       | 7             |            |        |
| 8                                       | REPAIR RIG                |       |     |                                    | 1       | 38.96      | 431           |            |        |
| 9                                       | CUT OFF DRILLING LINE     |       |     |                                    | 1       | 485.04     | 650           |            |        |
| 10                                      | DEVIATION SURVEY          | 1 1/2 |     |                                    |         |            |               |            |        |
| 11                                      | WIRE LINE LOGS            |       |     |                                    |         |            |               |            |        |
| 12                                      | RUN CASING & CEMENT       | 2     |     |                                    |         |            |               |            |        |
| 13                                      | WAIT ON CEMENT            |       |     |                                    |         |            |               |            |        |
| 14                                      | NIPPLE UP B.O.P.          |       |     |                                    |         |            |               |            |        |
| 15                                      | TEST B.O.P.               |       |     |                                    |         |            |               |            |        |
| 16                                      | DRILL STEM TEST           |       |     |                                    |         |            |               |            |        |
| 17                                      | PLUG BACK                 |       |     |                                    |         |            |               |            |        |
| 18                                      | SQUEEZE CEMENT            |       |     |                                    |         |            |               |            |        |
| 19                                      | FISHING                   |       |     |                                    |         |            |               |            |        |
| 20                                      | DIR. WORK                 |       |     |                                    |         |            |               |            |        |
| 21                                      |                           |       |     |                                    |         |            |               |            |        |
| 22                                      |                           |       |     |                                    |         |            |               |            |        |
| 23                                      |                           |       |     |                                    |         |            |               |            |        |
| COMPLETION                              |                           |       |     | DRILLING ASSEMBLY (At end of tour) |         | BIT RECORD |               | MUD RECORD |        |
| A                                       | PERF'R'Y                  |       |     |                                    | NO.     | FT.        | BIT NO.       | TIME       | WEIGHT |
| B                                       | TBG TRIPS                 |       |     |                                    | BIT     |            | SIZE          |            |        |
| C                                       | TREATING                  |       |     |                                    | STB RMR | OD         | FT. MFG.      |            |        |
| D                                       | SWABBING                  |       |     |                                    | D.C. ID | OD         | FT. TYPE      |            |        |
| E                                       | TESTING                   |       |     |                                    | STB RMR | OD         | FT. JET 1/32" |            |        |
| F                                       | ADDIT'NL                  |       |     |                                    | D.C. ID | OD         | FT. SER. NO.  |            |        |
| G                                       |                           |       |     |                                    | STB RMR | OD         | FT. DEPTH OUT |            |        |
| TOTALS                                  |                           |       |     | TOTAL                              |         | TOTAL      |               | TOTAL      |        |
| DAY WORK TIME SUMMARY (OFFICE USE ONLY) |                           |       |     | TOTAL                              |         | TOTAL      |               | TOTAL      |        |
| HRS. W/CONTR. D.P.                      |                           |       |     | TOTAL                              |         | TOTAL      |               | TOTAL      |        |
| HRS. W/OPR. D.P.                        |                           |       |     | TOTAL                              |         | TOTAL      |               | TOTAL      |        |
| HRS. W/D.P.                             |                           |       |     | TOTAL                              |         | TOTAL      |               | TOTAL      |        |
| HRS. STANDBY                            |                           |       |     | TOTAL                              |         | TOTAL      |               | TOTAL      |        |
| TOTAL DAY WORK                          |                           |       |     | TOTAL                              |         | TOTAL      |               | TOTAL      |        |
| NO. OF DAYS FROM SPUD                   |                           |       |     | TOTAL                              |         | TOTAL      |               | TOTAL      |        |
| CUMULATIVE ROTATING HRS.                |                           |       |     | TOTAL                              |         | TOTAL      |               | TOTAL      |        |
| TOTAL MUD COST                          |                           |       |     | TOTAL                              |         | TOTAL      |               | TOTAL      |        |

| FOOTAGE          |     | DR. D RM-R CORE-C | CORE NO. | FORMATION (SHOW CORE RECOVERY)                                   | ROTARY RPM | WT. ON BIT 1000#                                              | PUMP PRESS | PUMP NO. | PUMP NO. | METHOD RUN |
|------------------|-----|-------------------|----------|------------------------------------------------------------------|------------|---------------------------------------------------------------|------------|----------|----------|------------|
| FROM             | TO  |                   |          |                                                                  |            |                                                               |            |          |          |            |
| 374              | 483 | R                 |          |                                                                  | 120        | 510                                                           | 300        | 5 1/2    | 60       | 5          |
| DEVIATION RECORD |     | DEPTH             | DEV.     | DIRECTION                                                        | DEPTH      | DEV.                                                          | DIRECTION  | DEPTH    | DEV.     | DIRECTION  |
| TIME LOG         |     | FROM              | TO       | ELAPSED TIME                                                     | CODE NO.   | DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS                 |            |          |          |            |
|                  |     | 12 00             | 12 30    | 1/2                                                              |            | REAM 7 7/8 PILOT HOLE                                         |            |          |          |            |
|                  |     | 12 30             | 12 45    | 1/4                                                              |            | SURVEY @ 403                                                  |            |          |          |            |
|                  |     | 12 45             | 4 00     | 3 1/4                                                            |            | REAM 7 7/8 PILOT HOLE                                         |            |          |          |            |
|                  |     | 4 00              | 4 30     | 1/2                                                              |            | Circ To Run Csg                                               |            |          |          |            |
|                  |     | 4 30              | 4 45     | 1/4                                                              |            | SURVEY @ 483                                                  |            |          |          |            |
|                  |     | 4 45              | 6 00     | 1 1/4                                                            |            | TRIP OUT To Run Csg BAK REAMER, LAY DOWN SAMG                 |            |          |          |            |
|                  |     | 6 00              | 8 00     | 2                                                                |            | RIG TO AND Run 8 3/8 Csg                                      |            |          |          |            |
| FOOTAGE          |     | DR. D RM-R CORE-C | CORE NO. | FORMATION (SHOW CORE RECOVERY)                                   | ROTARY RPM | WT. ON BIT 1000#                                              | PUMP PRESS | PUMP NO. | PUMP NO. | METHOD RUN |
| FROM TO          |     |                   |          |                                                                  |            |                                                               |            |          |          |            |
| 12 00 12 30      |     | 2 1/2             |          | RAM 12 DTS 8 3/8" 3 1/2" STAC R3 JAP. Csg. NEW H.S. TOTAL LENGTH |            |                                                               |            |          |          |            |
| 486.20           |     |                   |          | LANDED ON BOTTOM @ 4831R                                         |            |                                                               |            |          |          |            |
| DEVIATION RECORD |     | DEPTH             | DEV.     | DIRECTION                                                        | DEPTH      | DEV.                                                          | DIRECTION  | DEPTH    | DEV.     | DIRECTION  |
| TIME LOG         |     | FROM              | TO       | ELAPSED TIME                                                     | CODE NO.   | DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS                 |            |          |          |            |
|                  |     | 8 00              | 10 00    | 2                                                                |            | RUN 8 3/8" Csg.                                               |            |          |          |            |
|                  |     | 10 00             | 11 00    | 1                                                                |            | Circ Csg.                                                     |            |          |          |            |
|                  |     | 11 00             | 12 30    | 1 1/2                                                            |            | Rig TO C Cement Csg.                                          |            |          |          |            |
|                  |     | 12 30             | 4 00     | 3 1/2                                                            |            | Plug down @ 1230                                              |            |          |          |            |
|                  |     |                   |          |                                                                  |            | CEMENTED w/ 275 SAG CONST CEMENT 2 DUAL CL2 DEN 15.5 DISP     |            |          |          |            |
|                  |     |                   |          |                                                                  |            | Plug TO INSERT FLAT @ 466.70 KLB w/ 30 BRLS WATER @ 2 GAL/min |            |          |          |            |
|                  |     |                   |          |                                                                  |            | Plug down 1230 PM FEB 26/73                                   |            |          |          |            |
| FOOTAGE          |     | DR. D RM-R CORE-C | CORE NO. | FORMATION (SHOW CORE RECOVERY)                                   | ROTARY RPM | WT. ON BIT 1000#                                              | PUMP PRESS | PUMP NO. | PUMP NO. | METHOD RUN |
| FROM TO          |     |                   |          |                                                                  |            |                                                               |            |          |          |            |
| 12 30 12 45      |     | 1                 |          | 1 BBL CEMENT RETAINED                                            |            |                                                               |            |          |          |            |
| 486.20           |     |                   |          | CEMENT DROPPED 30' IN ANNULUS. FILLED ANNULUS IN 4 HRS           |            |                                                               |            |          |          |            |
|                  |     |                   |          | w/ 75 SAG CONST. CEMENT 1 DUAL CL2                               |            |                                                               |            |          |          |            |
| DEVIATION RECORD |     | DEPTH             | DEV.     | DIRECTION                                                        | DEPTH      | DEV.                                                          | DIRECTION  | DEPTH    | DEV.     | DIRECTION  |
| TIME LOG         |     | FROM              | TO       | ELAPSED TIME                                                     | CODE NO.   | DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS                 |            |          |          |            |
|                  |     | 4 00              | 12 00    | 8                                                                |            | W.O.C.                                                        |            |          |          |            |
| FOOTAGE          |     | DR. D RM-R CORE-C | CORE NO. | FORMATION (SHOW CORE RECOVERY)                                   | ROTARY RPM | WT. ON BIT 1000#                                              | PUMP PRESS | PUMP NO. | PUMP NO. | METHOD RUN |
| FROM TO          |     |                   |          |                                                                  |            |                                                               |            |          |          |            |
| 4 00 12 00       |     | 8                 |          | W.O.C.                                                           |            |                                                               |            |          |          |            |

| MORNING TOUR 12 P.M. 8 A.M.                 |               |                  |      |
|---------------------------------------------|---------------|------------------|------|
| CREW                                        | SOC. SEC. NO. | NAME             | HRS. |
| DRILLER                                     |               | J. SANDER        | 8    |
| DRKMAN                                      |               | J. FELAND        | 8    |
| MTRMAN                                      |               | D. WITTER        | 8    |
| FIREMAN                                     |               |                  |      |
| FLRMAN                                      |               | G. SARMAHA       | 8    |
| FLRMAN                                      |               |                  |      |
| FLRMAN                                      |               |                  |      |
| NO. OF DAYS 8 SINCE LAST LOST TIME ACCIDENT |               |                  |      |
| DAY TOUR 8 A.M. 4 P.M.                      |               |                  |      |
| CREW                                        | SOC. SEC. NO. | NAME             | HRS. |
| DRILLER                                     |               | C. SANDQUIST     | 8    |
| DRKMAN                                      |               | D. LADICK        | 8    |
| MTRMAN                                      |               | R. THIEL         | 8    |
| FIREMAN                                     |               |                  |      |
| FLRMAN                                      |               | B. DOMEY         | 8    |
| FLRMAN                                      |               | J. COCHRAN       | 8    |
| FLRMAN                                      |               |                  |      |
| NO. OF DAYS 8 SINCE LAST LOST TIME ACCIDENT |               |                  |      |
| EVENING TOUR 4 00 P.M. 12 00 P.M.           |               |                  |      |
| CREW                                        | SOC. SEC. NO. | NAME             | HRS. |
| DRILLER                                     |               | PERRY WOODBRIDGE | 8    |
| DRKMAN                                      |               | LEO TOMCZAK      | 8    |
| MTRMAN                                      |               | RANDY CHISHOLM   | 8    |
| FIREMAN                                     |               |                  |      |
| FLRMAN                                      |               | VICTOR HOLMES    | 8    |
| FLRMAN                                      |               |                  |      |
| FLRMAN                                      |               |                  |      |
| NO. OF DAYS 8 SINCE LAST LOST TIME ACCIDENT |               |                  |      |

DRILLING CREW PAYROLL DATA

DATE EOB 25/71

WELL NAME & NO. PERKIE BRINE ALFA 212044 C-511

COMPANY KENTON PETROLEUM

TOOL PUSHER WORM TROTTING RIG NO. 9

| TIME DISTRIBUTION - HOURS |                           |       |     |      | NO. DRILLING ASSEMBLY<br>(At end of hour) |      | BIT RECORD           |                |  |  |                       | MUD RECORD        |      |      |  |
|---------------------------|---------------------------|-------|-----|------|-------------------------------------------|------|----------------------|----------------|--|--|-----------------------|-------------------|------|------|--|
| CODE NO.                  | OPERATION                 | MORN. | DAY | EVE. | BIT                                       | FT.  | BIT NO.              | SIZE           |  |  |                       | TIME              |      |      |  |
| 1.                        | RIG UP AND TEAR DOWN      |       |     |      | STB RMR                                   | OD   | FT.                  | MFG.           |  |  |                       | WEIGHT            |      |      |  |
| 2.                        | DRILL ACTUAL              |       |     |      | D.C. ID                                   | OD   | FT.                  | TYPE           |  |  |                       | PRESSURE GRADIENT |      |      |  |
| 3.                        | REAMING                   |       |     |      | STB RMR                                   | OD   | FT.                  | JETS 1.32"     |  |  |                       | VISC.-SEC.        |      |      |  |
| 4.                        | CORING                    |       |     |      | D.C. ID                                   | OD   | FT.                  | SER. NO.       |  |  |                       | PV./YP            |      |      |  |
| 5.                        | CONDITION MUD & CIRCULATE |       |     |      | STB RMR                                   | OD   | FT.                  | DEPTH OUT      |  |  |                       | GELS              |      |      |  |
| 6.                        | TRIPS                     |       |     |      |                                           |      |                      | DEPTH IN       |  |  |                       | WL -CC'S          |      |      |  |
| 7.                        | LUBRICATE RIG             |       |     |      |                                           |      |                      | TOTAL FTG.     |  |  |                       | pH                |      |      |  |
| 8.                        | REPAIR RIG                |       |     |      |                                           |      |                      | TOTAL HRS. RUN |  |  |                       | SOLIDS %          |      |      |  |
| 9.                        | CUT OFF DRILLING LINE     |       |     |      | STANDS DP                                 | FT.  | COND. 1/8" T/B: GAGE |                |  |  | MUD & CHEMICALS ADDED |                   |      |      |  |
| 10.                       | DEVIATION SURVEY          |       |     |      | SINGLES DP                                | FT.  | GPM/ PD-PSI          |                |  |  | TYPE                  | AMT.              | TYPE | AMT. |  |
| 11.                       | WIRE LINE LOGS            |       |     |      | KELLY DOWN                                | FT.  |                      |                |  |  |                       |                   |      |      |  |
| 12.                       | RUN CASING & CEMENT       |       |     |      | TOTAL                                     | FT.  |                      |                |  |  |                       |                   |      |      |  |
| 13.                       | WAIT ON CEMENT            |       |     |      | WT. OF STRING                             | LBS. |                      |                |  |  |                       |                   |      |      |  |

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| FOOTAGE |     | DR. D<br>RM-R<br>CORE...C | CORE<br>NO. | FORMATION<br>(SHOW CORE RECOVERY) | ROTARY<br>RPM | WT. ON<br>BIT<br>1000- | PUMP<br>PRESS | PUMP NO. 1    |          | PUMP NO.      |          | MET<br>R    |
|---------|-----|---------------------------|-------------|-----------------------------------|---------------|------------------------|---------------|---------------|----------|---------------|----------|-------------|
| FROM    | TO  |                           |             |                                   |               |                        |               | LINER<br>SIZE | S. P. M. | LINER<br>SIZE | S. P. M. | PUMP<br>NO. |
| 4131    | 505 |                           |             |                                   | 90            | 20                     | 400           | 5 1/2         | 60       |               |          |             |
|         |     |                           |             |                                   |               |                        |               |               |          |               |          |             |
|         |     |                           |             |                                   |               |                        |               |               |          |               |          |             |

| DEVIATION<br>RECORD | DEPTH | DEV. | DIRECTION | DEPTH | DEV. | DIRECTION | DEPTH | DEV. | DIRECTION |
|---------------------|-------|------|-----------|-------|------|-----------|-------|------|-----------|
|                     |       |      |           |       |      |           |       |      |           |

| TIME LOG         |                  | ELAPSED<br>TIME | CODE NO. | DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS |
|------------------|------------------|-----------------|----------|-----------------------------------------------|
| FROM             | TO               |                 |          |                                               |
| 8 <sup>00</sup>  | 9 <sup>30</sup>  | 1 1/2           |          | RIG TO PUMP FROM CELLAR W/ HOUSE              |
| 9 <sup>30</sup>  | 10 <sup>00</sup> | 1/2             |          | DRILL 2 3/4 PILOT HOLE                        |
| 10 <sup>00</sup> | 11 <sup>00</sup> | 1               |          | PUNCH HOLE IN CONDUCTOR BARRED                |
| 11 <sup>00</sup> | 1 <sup>15</sup>  | 2 3/4           |          | DRILL 2 3/4 PILOT HOLE                        |
| 1 <sup>15</sup>  | 1 <sup>45</sup>  | 1/2             |          | CIRC PRIOR TO TRIP OUT                        |
| 1 <sup>45</sup>  | 3 <sup>00</sup>  | 1 1/4           |          | TRIP OUT LAST 4 D.C. 100 HOLE                 |
| 3 <sup>00</sup>  | 4 <sup>00</sup>  | 1               |          | RUN 100 SCREEN IN TO D.C.                     |

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EVENING TOUR

| FOOTAGE             |                  | DR. D<br>RM-R<br>CORE C | CORE<br>NO. | FORMATION<br>(SHOW CORE RECOVERY)                              | ROTARY<br>RPM | WT. ON<br>BIT<br>1000# | PUMP<br>PRESS | PUMP NO. 1    |        | PUMP NO.      |        |
|---------------------|------------------|-------------------------|-------------|----------------------------------------------------------------|---------------|------------------------|---------------|---------------|--------|---------------|--------|
| FROM                | TO               |                         |             |                                                                |               |                        |               | LINER<br>SIZE | S.P.M. | LINER<br>SIZE | S.P.M. |
| 265                 | 324              | TR                      |             |                                                                | 120           | 510                    | 300           | 5 1/2         | 60     |               |        |
|                     |                  |                         |             |                                                                |               |                        |               |               |        |               |        |
|                     |                  |                         |             |                                                                |               |                        |               |               |        |               |        |
| DEVIATION<br>RECORD |                  | DEPTH                   | DEV.        | DIRECTION                                                      | DEPTH         | DEV.                   | DIRECTION     | DEPTH         | DEV.   | DIRECTION     |        |
| 317                 |                  |                         | 1/2         |                                                                |               |                        |               |               |        |               |        |
| TIME LOG            |                  | ELAPSED<br>TIME         | CODE NO.    | DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS                  |               |                        |               |               |        |               |        |
| FROM                | TO               |                         |             |                                                                |               |                        |               |               |        |               |        |
| 4 <sup>00</sup>     | 5 <sup>15</sup>  | 1 1/4                   |             | TRIP OUT W/ FISH 10 <sup>30</sup> -12 <sup>00</sup> 1 1/2 REAM |               |                        |               |               |        |               |        |
| 5 <sup>15</sup>     | 6 <sup>30</sup>  | 1 1/4                   |             | KEY POWER 4 D.C.'S                                             |               |                        |               |               |        |               |        |
| 6 <sup>30</sup>     | 6 <sup>45</sup>  | 1/4                     |             | PICK UP BELL'S HORN BEAMER.                                    |               |                        |               |               |        |               |        |
| 6 <sup>45</sup>     | 7 <sup>45</sup>  | 1                       |             | TRIP IN TO BEAR 7 1/2 HOLE                                     |               |                        |               |               |        |               |        |
| 7 <sup>45</sup>     | 9 <sup>00</sup>  | 1 1/4                   |             | REAM 7 1/2 PILOT HOLE                                          |               |                        |               |               |        |               |        |
| 9 <sup>00</sup>     | 9 <sup>15</sup>  | 1/4                     |             | PICK UP 1 STAY FROM DERRICK RUN IN SA                          |               |                        |               |               |        |               |        |
| 9 <sup>15</sup>     | 10 <sup>15</sup> | 1                       |             | REAM 7 1/2 PILOT HOLE                                          |               |                        |               |               |        |               |        |
| 10 <sup>15</sup>    | 10 <sup>30</sup> | 1/4                     |             | SUBMERSE 317                                                   |               |                        |               |               |        |               |        |
|                     |                  |                         |             | DRILLER 1                                                      |               |                        |               |               |        |               |        |

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FORM 3T5

|                                                              |                                  |                                                               |                            |
|--------------------------------------------------------------|----------------------------------|---------------------------------------------------------------|----------------------------|
| LEASE<br>PACIFIC AMERICA ALEXANDRIA C-54                     | WELL NO.<br>8-54                 | API WELL NUMBER<br>8-54-KC-30-1117-45-W                       | DATE<br>FEB 21 73          |
| OPERATOR<br>PACIFIC PETROLEUMS LTD                           | CONTRACTOR<br>KENTING - PETROLIA |                                                               | RIG NO.<br>9               |
| SIGNATURE OF OPERATOR'S REPRESENTATIVE<br><i>R.M. Kenton</i> |                                  | SIGNATURE OF CONTRACTOR'S TOOL PUSHER<br><i>M.L. Thompson</i> |                            |
| D.P. SIZE<br>4 1/2                                           | WT./FT.<br>166                   | GRADE<br>3                                                    | TOOL JT. Q.D.<br>5 1/2     |
| TYPE<br>FH                                                   | STRING NO.<br>1                  | PUMP NO.<br>1                                                 | PUMP MANUFACTURER<br>EMSCO |
| TYPE<br>D-300                                                |                                  | STROKE<br>14                                                  |                            |

## LEGAL LAND DESCRIPTION

|                                 |      |           |            |      |                  |        |                  |                |
|---------------------------------|------|-----------|------------|------|------------------|--------|------------------|----------------|
| SIZE                            | MAKE | WT. & GR. | NO. JOINTS | FEET | RKB. TO CSG. HD. | SET AT | WIRE LINE RECORD | REEL NO.       |
|                                 |      |           |            |      |                  |        | SIZE<br>1        | NO. LINES<br>8 |
| FT. CUT OFF                     |      |           |            |      |                  |        | PRESENT LENGTH   |                |
| TON MI. OR TRIPS SINCE LAST CUT |      |           |            |      |                  |        |                  |                |
| CUMULATIVE TON MI. OR TRIPS     |      |           |            |      |                  |        |                  |                |

## DRILLING CREW PAYROLL DATA

DATE FEB 21 73  
WELL NAME & NO. PACIFIC AMERICA ALEXANDRIA C-54  
COMPANY KENTING PETROLIA  
TOOL PUSHER M.L. Thompson RIG NO. 9

| TIME DISTRIBUTION - HOURS               |                           |       |     | DRILLING ASSEMBLY (At end of tour) |               | BIT RECORD |                      | MUD RECORD            |      |
|-----------------------------------------|---------------------------|-------|-----|------------------------------------|---------------|------------|----------------------|-----------------------|------|
| CODE NO.                                | OPERATION                 | MORN. | DAY | EVE.                               | BIT           | FT.        | BIT NO.              | TIME                  |      |
| 1.                                      | RIG UP AND TEAR DOWN      |       |     |                                    | STB RMR       | OD         | FT. MFG.             | WEIGHT                |      |
| 2.                                      | DRILL ACTUAL              |       |     |                                    | D.C. ID       | OD         | FT. TYPE             | PRESSURE GRADIENT     |      |
| 3.                                      | REAMING                   |       |     |                                    | STB RMR       | OD         | FT. JETS 1/32"       | VISC.-SEC.            |      |
| 4.                                      | CORING                    |       |     |                                    | D.C. ID       | OD         | FT. SER. NO.         | PV/YP                 |      |
| 5.                                      | CONDITION MUD & CIRCULATE |       |     |                                    | STB RMR       | OD         | FT. DEPTH OUT        | GELS                  |      |
| 6.                                      | TRIPS                     |       |     |                                    |               |            | DEPTH IN             | WL.-CC'S              |      |
| 7.                                      | LUBRICATE RIG             |       |     |                                    |               |            | TOTAL FTG.           | pH                    |      |
| 8.                                      | REPAIR RIG                |       |     |                                    |               |            | TOTAL HRS. RUN       | SOLIDS %              |      |
| 9.                                      | CUT OFF DRILLING LINE     |       |     |                                    | STANDS DP     | FT.        | COND. 1/8" T/B/ GAGE | MUD & CHEMICALS ADDED |      |
| 10.                                     | DEVIATION SURVEY          |       |     |                                    | SINGLES DP    | FT.        | GPM/ PD-PSI          | TYPE                  | AMT. |
| 11.                                     | WIRE LINE LOGS            |       |     |                                    | KELLY DOWN    | FT.        |                      |                       |      |
| 12.                                     | RUN CASING & CEMENT       |       |     |                                    | TOTAL         | FT.        |                      |                       |      |
| 13.                                     | WAIT ON CEMENT            |       |     |                                    | WT. OF STRING | LBS.       |                      |                       |      |
| 14.                                     | NIPPLE UP B.O.P.          |       |     |                                    |               |            |                      |                       |      |
| 15.                                     | TEST B.O.P.               |       |     |                                    |               |            |                      |                       |      |
| 16.                                     | DRILL STEM TEST           |       |     |                                    |               |            |                      |                       |      |
| 17.                                     | PLUG BACK                 |       |     |                                    |               |            |                      |                       |      |
| 18.                                     | SQUEEZE CEMENT            |       |     |                                    |               |            |                      |                       |      |
| 19.                                     | FISHING                   |       |     |                                    |               |            |                      |                       |      |
| 20.                                     | DIR. WORK                 |       |     |                                    |               |            |                      |                       |      |
| 21.                                     | Make Rig up               | 8     | 9   | 4                                  |               |            |                      |                       |      |
| 22.                                     |                           |       |     |                                    |               |            |                      |                       |      |
| 23.                                     |                           |       |     |                                    |               |            |                      |                       |      |
| COMPLETION                              |                           |       |     |                                    |               |            |                      |                       |      |
| A. PERF'R'IN                            |                           |       |     |                                    |               |            |                      |                       |      |
| B. TBG TRIPS                            |                           |       |     |                                    |               |            |                      |                       |      |
| C. TREATING                             |                           |       |     |                                    |               |            |                      |                       |      |
| D. SWABBING                             |                           |       |     |                                    |               |            |                      |                       |      |
| E. TESTING                              |                           |       |     |                                    |               |            |                      |                       |      |
| F. ADDIT'NL                             |                           |       |     |                                    |               |            |                      |                       |      |
| G.                                      |                           |       |     |                                    |               |            |                      |                       |      |
| TOTALS                                  |                           |       |     |                                    |               |            |                      |                       |      |
| DAY WORK TIME SUMMARY (OFFICE USE ONLY) |                           |       |     |                                    |               |            |                      |                       |      |
| HRS. W/CONTR. D.P.                      |                           |       |     |                                    |               |            |                      |                       |      |
| HRS. W/OPR. D.P.                        |                           |       |     |                                    |               |            |                      |                       |      |
| WD/D.P.                                 |                           |       |     |                                    |               |            |                      |                       |      |
| HRS. STANDBY                            |                           |       |     |                                    |               |            |                      |                       |      |
| TOTAL DAY WORK                          |                           |       |     |                                    |               |            |                      |                       |      |
| NO. OF DAYS FROM SPUD                   |                           |       |     |                                    |               |            |                      |                       |      |
| CUMULATIVE ROTATING HRS.                |                           |       |     |                                    |               |            |                      |                       |      |
| TOTAL MUD COST                          |                           |       |     |                                    |               |            |                      |                       |      |

MORNING TOUR

DAY TOUR

EVENING TOUR

| FOOTAGE          |    | DR. D RMR. CORE.C | CORE NO. | FORMATION (SHOW CORE RECOVERY)                |  | ROTARY RPM | WT. ON BIT 1000 | PUMP PRESS | PUMP NO. | PUMP NO. | METHOD RUN |
|------------------|----|-------------------|----------|-----------------------------------------------|--|------------|-----------------|------------|----------|----------|------------|
| FROM             | TO |                   |          |                                               |  |            |                 |            |          |          |            |
| 12               | 16 |                   |          |                                               |  |            |                 |            |          |          |            |
| DEVIATION RECORD |    |                   |          |                                               |  |            |                 |            |          |          |            |
| TIME LOG         |    | ELAPSED TIME      | CODE NO. | DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS |  |            |                 |            |          |          |            |
| FROM             | TO |                   |          | R.I.C. UP<br>MARSHLAND TRANSPORT MCLING AVE   |  |            |                 |            |          |          |            |
| 12               | 16 |                   |          |                                               |  |            |                 |            |          |          |            |
| FOOTAGE          |    |                   |          |                                               |  |            |                 |            |          |          |            |
| FROM             | TO | DR. D RMR. CORE.C | CORE NO. | FORMATION (SHOW CORE RECOVERY)                |  | ROTARY RPM | WT. ON BIT 1000 | PUMP PRESS | PUMP NO. | PUMP NO. | METHOD RUN |
|                  |    |                   |          |                                               |  |            |                 |            |          |          |            |
| DEVIATION RECORD |    |                   |          |                                               |  |            |                 |            |          |          |            |
| TIME LOG         |    | ELAPSED TIME      | CODE NO. | DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS |  |            |                 |            |          |          |            |
| FROM             | TO |                   |          | R.I.C. MOVE AND R.I.C. UP                     |  |            |                 |            |          |          |            |
| 8                | 16 |                   |          |                                               |  |            |                 |            |          |          |            |
| FOOTAGE          |    |                   |          |                                               |  |            |                 |            |          |          |            |
| FROM             | TO | DR. D RMR. CORE.C | CORE NO. | FORMATION (SHOW CORE RECOVERY)                |  | ROTARY RPM | WT. ON BIT 1000 | PUMP PRESS | PUMP NO. | PUMP NO. | METHOD RUN |
|                  |    |                   |          |                                               |  |            |                 |            |          |          |            |
| DEVIATION RECORD |    |                   |          |                                               |  |            |                 |            |          |          |            |
| TIME LOG         |    | ELAPSED TIME      | CODE NO. | DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS |  |            |                 |            |          |          |            |
| FROM             | TO |                   |          | R.I.C. UP                                     |  |            |                 |            |          |          |            |
| 8                | 18 |                   |          |                                               |  |            |                 |            |          |          |            |
| FOOTAGE          |    |                   |          |                                               |  |            |                 |            |          |          |            |
| FROM             | TO | DR. D RMR. CORE.C | CORE NO. | FORMATION (SHOW CORE RECOVERY)                |  | ROTARY RPM | WT. ON BIT 1000 | PUMP PRESS | PUMP NO. | PUMP NO. | METHOD RUN |
|                  |    |                   |          |                                               |  |            |                 |            |          |          |            |
| DEVIATION RECORD |    |                   |          |                                               |  |            |                 |            |          |          |            |
| TIME LOG         |    | ELAPSED TIME      | CODE NO. | DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS |  |            |                 |            |          |          |            |
| FROM             | TO |                   |          | R.I.C. UP                                     |  |            |                 |            |          |          |            |
| 8                | 18 |                   |          |                                               |  |            |                 |            |          |          |            |

| MORNING TOUR 12 P.M. 3 A.M.               |               |                  |      |
|-------------------------------------------|---------------|------------------|------|
| CREW                                      | SOC. SEC. NO. | NAME             | HRS. |
| DRILLER                                   |               | BARRY SHANDRIDGE | 10   |
| DRKMAN                                    |               | LEE TONGKAT      | 10   |
| MTRMAN                                    |               | RANDY CHISHOLM   | 10   |
| FIREMAN                                   |               |                  |      |
| FLRMAN                                    |               | PEPE McFADDEN    | 10   |
| FLRMAN                                    |               |                  |      |
| FLRMAN                                    |               |                  |      |
| NO. OF DAYS SINCE LAST LOST TIME ACCIDENT |               |                  |      |
| DAY TOUR 8 A.M. 4 P.M.                    |               |                  |      |
| CREW                                      | SOC. SEC. NO. | NAME             | HRS. |
| DRILLER                                   |               | L SANDER         | 16   |
| DRKMAN                                    |               | J ELLAND         | 16   |
| MTRMAN                                    |               | D WITTER         | 16   |
| FIREMAN                                   |               |                  |      |
| FLRMAN                                    |               | B SARMACH        | 17   |
| FLRMAN                                    |               | J ECHARRA        | 16   |
| FLRMAN                                    |               |                  |      |
| NO. OF DAYS SINCE LAST LOST TIME ACCIDENT |               |                  |      |
| EVENING TOUR 4 P.M. 12 P.M.               |               |                  |      |
| CREW                                      | SOC. SEC. NO. | NAME             | HRS. |
| DRILLER                                   |               | C SANDRIST       | 18   |
| DRKMAN                                    |               | D LAUCK          | 18   |
| MTRMAN                                    |               | R THIEL          | 16   |
| FIREMAN                                   |               |                  |      |
| FLRMAN                                    |               | B DOMEY          | 18   |
| FLRMAN                                    |               |                  |      |
| FLRMAN                                    |               |                  |      |
| NO. OF DAYS SINCE LAST LOST TIME ACCIDENT |               |                  |      |

