



Operator Name ..... BHP Petroleum (Americas), Inc. Lease Name..... Sell ..... Well #..... 2-22  
 Sec..... 22 ..... Twp..... 16S ..... Rge..... 41W ..... ☐ East ☒ West County..... Greeley .....

WELL LOG

INSTRUCTIONS: Show important tops and base of formations penetrated. Detail all cores. Report all drill stem tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface during test. Attach extra sheet if more space is needed. Attach copy of log.

|                                                                                                                                                                                                                                                                                          |                                                                                                         |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
| Drill Stem Tests Taken <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No<br>* Samples Sent to Geological Survey <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No<br>Cores Taken <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | <b>Formation Description</b><br><input checked="" type="checkbox"/> Log <input type="checkbox"/> Sample |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|

| * Core Description: 4975 - 5075<br>4975 - 5008 Shale<br>5008 - 5029 Siltstone<br>5029 - 5054 Shale<br>5054 - 5076 Limestone | <table border="0"> <tr> <th>Name</th> <th>Top</th> <th>Bottom</th> </tr> <tr> <td>Stone Coral</td> <td>2652</td> <td></td> </tr> <tr> <td>Neva</td> <td>3397</td> <td></td> </tr> <tr> <td>Foraker</td> <td>3466</td> <td></td> </tr> <tr> <td>Shawnee</td> <td>3774</td> <td></td> </tr> <tr> <td>Lansing</td> <td>4117</td> <td></td> </tr> <tr> <td>Marmaton</td> <td>4530</td> <td></td> </tr> <tr> <td>Cherokee</td> <td>4667</td> <td></td> </tr> <tr> <td>Atoka</td> <td>4811</td> <td></td> </tr> <tr> <td>Morrow</td> <td>4944</td> <td></td> </tr> <tr> <td>Keyes</td> <td>5064</td> <td></td> </tr> <tr> <td>Ste. Gen.</td> <td>5113</td> <td></td> </tr> <tr> <td>St. Louis</td> <td>5168</td> <td></td> </tr> <tr> <td>TD</td> <td>5230</td> <td></td> </tr> </table> | Name   | Top | Bottom | Stone Coral | 2652 |  | Neva | 3397 |  | Foraker | 3466 |  | Shawnee | 3774 |  | Lansing | 4117 |  | Marmaton | 4530 |  | Cherokee | 4667 |  | Atoka | 4811 |  | Morrow | 4944 |  | Keyes | 5064 |  | Ste. Gen. | 5113 |  | St. Louis | 5168 |  | TD | 5230 |  |
|-----------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|-----|--------|-------------|------|--|------|------|--|---------|------|--|---------|------|--|---------|------|--|----------|------|--|----------|------|--|-------|------|--|--------|------|--|-------|------|--|-----------|------|--|-----------|------|--|----|------|--|
| Name                                                                                                                        | Top                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Bottom |     |        |             |      |  |      |      |  |         |      |  |         |      |  |         |      |  |          |      |  |          |      |  |       |      |  |        |      |  |       |      |  |           |      |  |           |      |  |    |      |  |
| Stone Coral                                                                                                                 | 2652                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |        |     |        |             |      |  |      |      |  |         |      |  |         |      |  |         |      |  |          |      |  |          |      |  |       |      |  |        |      |  |       |      |  |           |      |  |           |      |  |    |      |  |
| Neva                                                                                                                        | 3397                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |        |     |        |             |      |  |      |      |  |         |      |  |         |      |  |         |      |  |          |      |  |          |      |  |       |      |  |        |      |  |       |      |  |           |      |  |           |      |  |    |      |  |
| Foraker                                                                                                                     | 3466                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |        |     |        |             |      |  |      |      |  |         |      |  |         |      |  |         |      |  |          |      |  |          |      |  |       |      |  |        |      |  |       |      |  |           |      |  |           |      |  |    |      |  |
| Shawnee                                                                                                                     | 3774                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |        |     |        |             |      |  |      |      |  |         |      |  |         |      |  |         |      |  |          |      |  |          |      |  |       |      |  |        |      |  |       |      |  |           |      |  |           |      |  |    |      |  |
| Lansing                                                                                                                     | 4117                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |        |     |        |             |      |  |      |      |  |         |      |  |         |      |  |         |      |  |          |      |  |          |      |  |       |      |  |        |      |  |       |      |  |           |      |  |           |      |  |    |      |  |
| Marmaton                                                                                                                    | 4530                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |        |     |        |             |      |  |      |      |  |         |      |  |         |      |  |         |      |  |          |      |  |          |      |  |       |      |  |        |      |  |       |      |  |           |      |  |           |      |  |    |      |  |
| Cherokee                                                                                                                    | 4667                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |        |     |        |             |      |  |      |      |  |         |      |  |         |      |  |         |      |  |          |      |  |          |      |  |       |      |  |        |      |  |       |      |  |           |      |  |           |      |  |    |      |  |
| Atoka                                                                                                                       | 4811                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |        |     |        |             |      |  |      |      |  |         |      |  |         |      |  |         |      |  |          |      |  |          |      |  |       |      |  |        |      |  |       |      |  |           |      |  |           |      |  |    |      |  |
| Morrow                                                                                                                      | 4944                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |        |     |        |             |      |  |      |      |  |         |      |  |         |      |  |         |      |  |          |      |  |          |      |  |       |      |  |        |      |  |       |      |  |           |      |  |           |      |  |    |      |  |
| Keyes                                                                                                                       | 5064                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |        |     |        |             |      |  |      |      |  |         |      |  |         |      |  |         |      |  |          |      |  |          |      |  |       |      |  |        |      |  |       |      |  |           |      |  |           |      |  |    |      |  |
| Ste. Gen.                                                                                                                   | 5113                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |        |     |        |             |      |  |      |      |  |         |      |  |         |      |  |         |      |  |          |      |  |          |      |  |       |      |  |        |      |  |       |      |  |           |      |  |           |      |  |    |      |  |
| St. Louis                                                                                                                   | 5168                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |        |     |        |             |      |  |      |      |  |         |      |  |         |      |  |         |      |  |          |      |  |          |      |  |       |      |  |        |      |  |       |      |  |           |      |  |           |      |  |    |      |  |
| TD                                                                                                                          | 5230                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |        |     |        |             |      |  |      |      |  |         |      |  |         |      |  |         |      |  |          |      |  |          |      |  |       |      |  |        |      |  |       |      |  |           |      |  |           |      |  |    |      |  |

|                                                                                                                                                              |                   |                           |                |               |                |             |                            |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|---------------------------|----------------|---------------|----------------|-------------|----------------------------|
| <b>CASING RECORD</b> <input type="checkbox"/> New <input type="checkbox"/> Used<br>Report all strings set-conductor, surface, intermediate, production, etc. |                   |                           |                |               |                |             |                            |
| Purpose of String                                                                                                                                            | Size Hole Drilled | Size Casing Set (in O.D.) | Weight Lbs/Ft. | Setting Depth | Type of Cement | #Sacks Used | Type and Percent Additives |
| Surface                                                                                                                                                      | 12 1/4"           | 8-5/8"                    |                | 401'          | 60-40 Poz      | 250         | 2% gel, 3% cc              |
|                                                                                                                                                              |                   |                           |                |               |                |             |                            |
|                                                                                                                                                              |                   |                           |                |               |                |             |                            |
|                                                                                                                                                              |                   |                           |                |               |                |             |                            |

|                                                                                         |  |                                                                                                |  |
|-----------------------------------------------------------------------------------------|--|------------------------------------------------------------------------------------------------|--|
| <b>PERFORATION RECORD</b><br>Shots Per Foot Specify Footage of Each Interval Perforated |  | <b>Acid, Fracture, Shot, Cement Squeeze Record</b><br>(Amount and Kind of Material Used) Depth |  |
|                                                                                         |  |                                                                                                |  |
|                                                                                         |  |                                                                                                |  |
|                                                                                         |  |                                                                                                |  |
|                                                                                         |  |                                                                                                |  |

|                                            |                                                                                                                                                                    |                                                                    |                    |
|--------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|--------------------|
| <b>TUBING RECORD</b> Size Set At Packer at |                                                                                                                                                                    | Liner Run <input type="checkbox"/> Yes <input type="checkbox"/> No |                    |
| Date of First Production                   | Producing Method <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other (explain)..... |                                                                    |                    |
| Estimated Production Per 24 Hours          | Oil                                                                                                                                                                | Gas                                                                | Water              |
|                                            | Bbls                                                                                                                                                               | MCF                                                                | Bbls               |
|                                            |                                                                                                                                                                    |                                                                    | Gas-Oil Ratio CFPB |

|                                                                                                                                                         |  |                                                                                                                                                                                                         |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <b>METHOD OF COMPLETION</b><br>Disposition of gas: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease |  | <input type="checkbox"/> Open Hole <input type="checkbox"/> Perforation <input type="checkbox"/> Other (Specify) .....<br><input type="checkbox"/> Dually Completed <input type="checkbox"/> Commingled |  |
|                                                                                                                                                         |  | Production Interval .....                                                                                                                                                                               |  |

BHP Petroleum (Americas) Inc.  
#2-22 Sell  
NW NW NE Sec. 22-16s-41w  
Greeley County, Kansas

MAR 0 7 1990

FROM CONFIDENTIAL

Geological supervision of the above referenced well was from 3400' to total depth.  
A copy of the drilling time log and sample description is included with this report  
in the pocket on the back cover.

The following is data pertaining to this test well

|                     |                                                                                                      |
|---------------------|------------------------------------------------------------------------------------------------------|
| OPERATOR:           | BHP Petroleum (Americas) Inc.                                                                        |
| CONTRACTOR:         | Murfin Drilling Co, Rtg #2                                                                           |
| DRILLING COMMENCED: | 12-15-88                                                                                             |
| DRILLING COMPLETED: | 1-1-89                                                                                               |
| SURFACE PIPE:       | 8 5/8" hole @ 401'                                                                                   |
| PRODUCTION CASING:  | none                                                                                                 |
| ROTARY TOTAL DEPTH: | 5230'                                                                                                |
| LOG TOTAL DEPTH:    | 5225'                                                                                                |
| ELECTRICAL SURVEY:  | Density-Neutron, Dual Induction, BHC Acoustilog                                                      |
| CORING RECORD:      | Diamond Bit Stratabit (Welex)<br>(1) 4975' - 5004'<br>(2) 5004.7' - 5024.6'<br>(3) 5025.6' - 5075.5' |
| MUD COMPANY:        | Davis Mud Co.: Chemical                                                                              |
| DRILL STEM TESTS:   | none                                                                                                 |
| ELEVATION:          | KB: 3706' GL: 3701'                                                                                  |

The following formation tops were determined from the electric log. All depths  
are measured from the kelly bushing.

| FORMATION         | DEPTH | SUB SEA ELEVATION |
|-------------------|-------|-------------------|
| Dakota            | 1294' | +2412             |
| Blaine            | 2086' | +1622             |
| Top/Stone Corral  | 2648' | +1058             |
| Base/Stone Corral | 2676' | +1030             |
| Neva              | 3398' | + 308             |
| Foraker           | 3468' | + 238             |
| Shawnee           | 3772' | - 66              |
| Lansing           | 4118' | - 412             |
| Marmaton          | 4533' | - 827             |
| Cherokee          | 4667' | - 961             |
| Atoka             | 4810' | -1104             |
| Morrow            | 4940' | -1234             |
| Keyes             | 5047' | -1341             |
| St. Gen           | 5118' | -1412             |
| St. Louis         | 5154' | -1448             |
| ITD               | 5225' | -1519             |

RECEIVED  
OIL CORPORATION COMMISSION

FEB 21 1989

CONSERVATION DIVISION  
Tulsa, Kansas

BHP Petroleum (Americas) Inc.  
#2-22 Sell  
NW NW NE Sec. 22-16s-41w  
Greeley County, Kansas

15-071-20463-00-00

RELEASED

MAR 07 1990

FROM CONFIDENTIAL

CHRONOLOGY

|                   |                                                                                                                                                                   |
|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 12-15-88          | Spud: 5:30 pm Drilled 12 1/4" hole to 320'<br>Ran 9 jnts 8 5/8" 24# J55 Set @ 401'                                                                                |
| 12-16-88          | Waiting on cement @ 408'                                                                                                                                          |
| 12-17-88          | Drilling @ 1950'                                                                                                                                                  |
| 12-18-88          | Drilling @ 3415'                                                                                                                                                  |
| 12-19-88          | Drilling @ 4080'                                                                                                                                                  |
| 12-20-88          | Circ @ 4148' Fighting for cone/recovered 1 cone                                                                                                                   |
| 12-21-88          | Drilling @ 4600'                                                                                                                                                  |
| 12-22-88          | Rig down for Christmas @ 4900'                                                                                                                                    |
| 12-23 to 12-26-88 | Shut in                                                                                                                                                           |
| 12-27-88          | Rig up with w/core bbl @ 4975'                                                                                                                                    |
| 12-28-88          | TH w/core bbl @ 5004' Core bbl jammed                                                                                                                             |
| 12-29-88          | Coring #3 @ 5031' Core bbl jammed on #2 core                                                                                                                      |
| 12-30-88          | Drilling 7 7/8" hole @ 5083'                                                                                                                                      |
| 12-31-88          | RTD 5230' Running logs                                                                                                                                            |
| 1-1-89            | Rig down @ 5230' Plug & abandon:<br>100 sx @ 3000', 50 sx @ 2680', 100sx @ 1650'<br>50 sx @ 430', 10 sx @ 40' & 15 sx in rathole<br>Rig returned 5:00 pm 12-31-88 |

MUD PROPERTIES:

|          | Mud Weight | Viscosity | Water Loss |
|----------|------------|-----------|------------|
| 12-17-88 | 8.9        | 27        |            |
| 12-18-88 | 9.3        | 28        |            |
| 12-19-88 | 8.9        | 36        | 14.2       |
| 12-20-88 | 8.9        | 40        | 10.4       |
| 12-21-88 | 9.1        | 47        | 8.8        |
| 12-27-88 | 9.1        | 45        | 7.6        |
| 12-28-88 | 9.0        | 37        | 10.6       |
| 12-29-88 | 9.0        | 42        | 10.6       |
| 12-30-88 | 9.1        | 66        | 9.0        |
| 12-31-88 | 9.0        | 44        | 8.4        |

DEVIATION SURVEYS:

12-16-88 3/4° @ 97' & 1/4° @ 408'  
12-20-88 1/4° @ 4148'

RECEIVED  
STATE CORPORATION COMMISSION

FEB 21 1989

CONSERVATION DIVISION  
Wichita Kansas