

DRILL-STEM TEST DATA

| | | | |
|-------------|------------------|-------------|--------------|
| Well Name | Barder "A" | Test No. | 1 |
| Well Number | 2 | Zone Tested | Lansing K.C. |
| Company | Bowers Drlg. Co. | Date | 4 - 23 - 67 |
| Comp. Rep. | Bob McCann | Tester | V. Williams |
| Contractor | Co. Tools | Ticket No. | ST - 1055 |
| Location | | Elevation | 1763 D.F. |

Recorder No. 1055 Clock Range 12 hr. Recorder No. 282 6 Clock Range 12 hr.
 Depth 3677' Depth 3707'
 Initial Hydro Mud Press. 2049 Initial Hydro Mud Press. 2063
 Initial Shut-in Press. 1348 Initial Shut-in Press. 1357
 Initial Flow Press. 63 Initial Flow Press. 84
 Final Flow Press. 121 Final Flow Press. 136
 Final Shut-in Press. 1315 Final Shut-in Press. 1332
 Final Hydro Mud Press. 2001 Final Hydro Mud Press. 2019
 Temperature 118 ° F Tool Open Before I. S. I. 10 Mins.
 Mud Drop 1' Initial Shut-in 30 Mins.
 Mud Weight 10 #/gal. Viscosity 41 cp Flow Period 60 Mins.
 Fluid Loss 8.8 cc Final Shut-in 30 Mins.
 Interval Tested 3700' to 3710' Surface Choke Size 1"
 Net Pay Tested 2' Bottom Choke Size 3/4"
 Top Packer Depth 3695' Main Hole Size 7-7/8"
 Bottom Packer Depth 3700' Rat Hole Size _____
 Total Depth 3710' Feet Of Rat Hole _____
 Drill Pipe Size 4-1/2" FH Wt. 16.60 Type of Test Testin in open hole
 Drill Collar I. D. 2-1/4" Ft. Run 150 Cushion Amount—Type _____
 Anchor Size 5-1/2" OD Rubber Size 6-3/4"

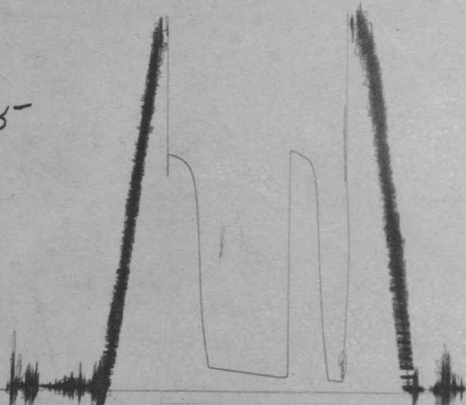
Recovery—Total Feet _____
 Recovered 50 Feet Of Hvy. Oil cut mud.
 Recovered 240 Feet Of Muddy oil.
 Recovered _____ Feet Of _____
 Recovered _____ Feet Of _____

Remarks

Strong blow Gas to surface in 14 min. after I.B.H.P.

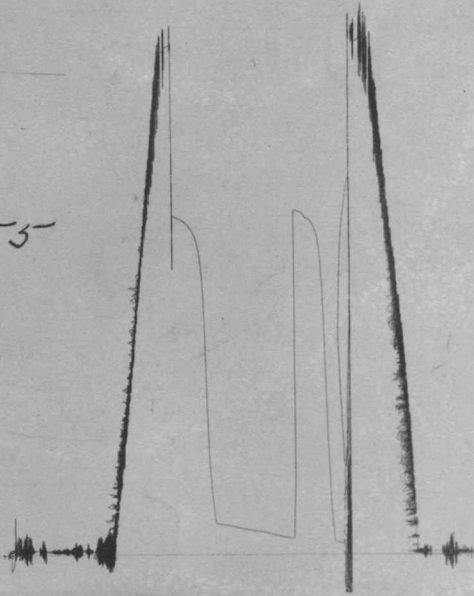
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ST-1055



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ST-1055





DRILL-STEM TEST DATA

| | | | |
|-------------|------------------|-------------|--------------|
| Well Name | Barder "A" | Test No. | 2 |
| Well Number | 2 | Zone Tested | Lansing K.C. |
| Company | Bowers Drlg. Co. | Date | 4 - 24 - 67 |
| Comp. Rep. | Bob McCann | Tester | V. Williams |
| Contractor | Co. Tools | Ticket No. | ST 1056 |
| Location | | Elevation | 1763 D.F. |

Recorder No. 2826 Clock Range 12 hr. Recorder No. 1055 Clock Range 12 hr.
 Depth 3782' Depth 3812'
 Initial Hydro Mud Press. 2072 Initial Hydro Mud Press. 2123
 Initial Shut-in Press. 1329 Initial Shut-in Press. 1339
 Initial Flow Press. 77 Initial Flow Press. 72
 Final Flow Press. 154 Final Flow Press. 150
 Final Shut-in Press. 1224 Final Shut-in Press. 1237
 Final Hydro Mud Press. 2063 Final Hydro Mud Press. 2071

Temperature _____ Tool Open Before I. S. I. 10 Mins.
 Mud Drop 1' Initial Shut-in 30 Mins.
 Mud Weight 10 #/gal. Viscosity 41 cp Flow Period 60 Mins.
 Fluid Loss 8.8 cc Final Shut-in 30 Mins.

Interval Tested 3805' to 3815' Surface Choke Size 1"
 Net Pay Tested 3' Bottom Choke Size 3/4"
 Top Packer Depth 3800' Main Hole Size 7-7/8"
 Bottom Packer Depth 3805' Rat Hole Size _____
 Total Depth 3815' Feet Of Rat Hole _____
 Drill Pipe Size 4-1/2" FH Wt. 16.60 Type of Test Open hole
 Drill Collar I. D. 2-1/4" Ft. Run 150 Cushion Amount—Type _____
 Anchor Size 5-1/2" OD Rubber Size 6-3/4"

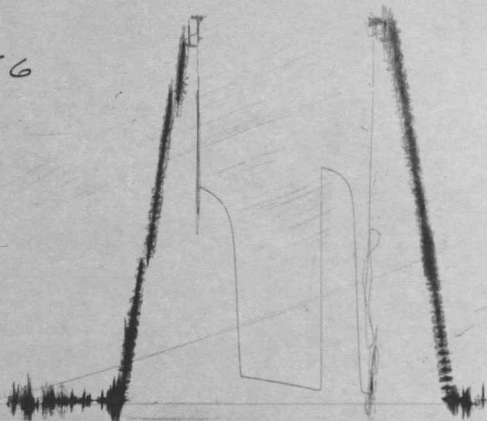
Recovery—Total Feet _____
 Recovered 50 Feet Of Slightly oil cut mud.
 Recovered 90 Feet Of Hvy. oil cut mud.
 Recovered 140 Feet Of Muddy oil.
 Recovered 70 Feet Of Slightly oil cut water/

Remarks

Strong blow Gas to surface in 26 min. after IBHP

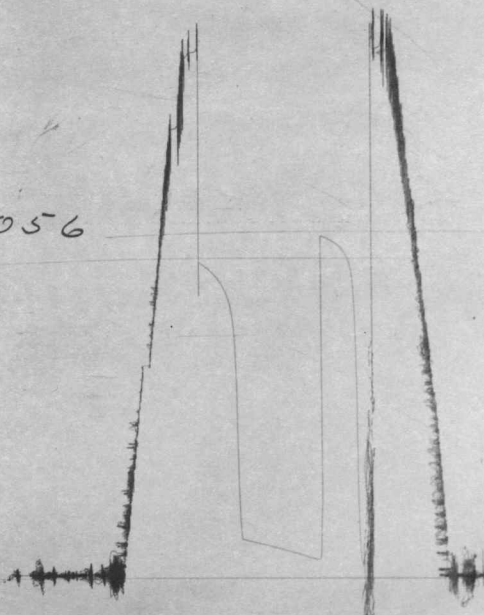
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ST-1056





DRILL-STEM TEST DATA

| | |
|-----------------------------|----------------------------|
| Well Name Barker "A" | Test No. 3 |
| Well Number 2 | Zone Tested Mississippi |
| Company Bowers Drlg. Co. | Date 4 - 26 -67 |
| Comp. Rep. Bob McCann | Tester V. Williams |
| Contractor Co. Tools | Ticket No. ST - 1057 |
| Location | Elevation 1763 D.F. |

| | | | |
|-------------------------------|--------------------|-------------------------------|--------------------|
| Recorder No. 2826 | Clock Range 12 hr. | Recorder No. 1055 | Clock Range 12 hr. |
| Depth 4036' | | Depth 4089' | |
| Initial Hydro Mud Press. 2233 | | Initial Hydro Mud Press. 2240 | |
| Initial Shut-in Press. 202 | | Initial Shut-in Press. 202 | |
| Initial Flow Press. 79 | | Initial Flow Press. 85 | |
| Final Flow Press. 79 | | Final Flow Press. 90 | |
| Final Shut-in Press. 150 | | Final Shut-in Press. 161 | |
| Final Hydro Mud Press. 2135 | | Final Hydro Mud Press. 2277 | |

| | | |
|----------------------|------------------------------|----------------|
| Temperature | Tool Open Before I. S. I. 20 | Mins. |
| Mud Drop 1' | Initial Shut-in 30 | Mins. |
| Mud Weight 10 #/gal. | Viscosity 42 cp | Flow Period 60 |
| Fluid Loss 8.4 cc | Final Shut-in 45 | Mins. |

| | |
|---------------------------------------|------------------------|
| Interval Tested 4049' to 4092' | Surface Choke Size 1" |
| Net Pay Tested | Bottom Choke Size 3/4" |
| Top Packer Depth 4044' | Main Hole Size 7-7/8" |
| Bottom Packer Depth 4049' | Rat Hole Size |
| Total Depth 4092' | Feet Of Rat Hole |
| Drill Pipe Size 4-1/2 FH Wt. 16.60 | Type of Test Open hole |
| Drill Collar I. D. 2-1/4" Ft. Run 150 | Cushion Amount—Type |
| Anchor Size 5-1/2" OD | Rubber Size 6-3/4" |

Recovery—Total Feet _____

Recovered 90 Feet Of Drlg. mud.

Recovered _____ Feet Of _____

Recovered _____ Feet Of _____

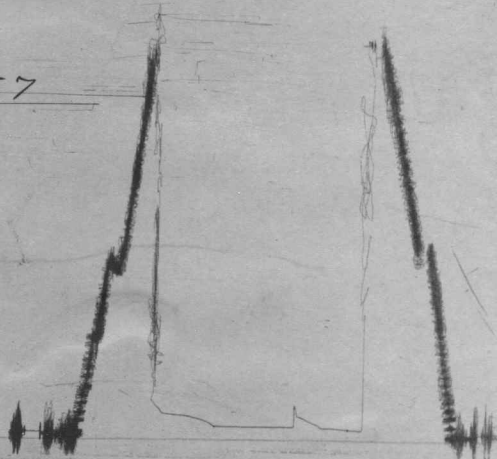
Recovered _____ Feet Of _____

Remarks

Strong blow. Gas to surface in 20 min. T.S.T.M.

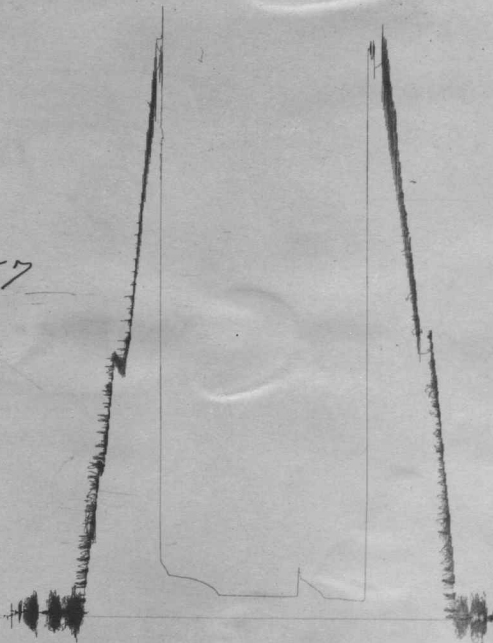
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ST-1057



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ST-1057





DRILL-STEM TEST DATA

| | | | |
|-------------|-----------------|-------------|--------------|
| Well Name | Barker "A" | Test No. | 4 |
| Well Number | 2 | Zone Tested | Simpson Sand |
| Company | Bowers Dlr. Co. | Date | 4 - 28 - 67 |
| Comp. Rep. | Bob McCann | Tester | V. Williams |
| Contractor | Co. Tools | Ticket No. | ST - 1058 |
| Location | | Elevation | 1763 D.F. |

| | | | |
|-------------------------------|--------------------|-------------------------------|--------------------|
| Recorder No. 2826 | Clock Range 12 hr. | Recorder No. 1055 | Clock Range 12 hr. |
| Depth 4326' | | Depth 4352' | |
| Initial Hydro Mud Press. 2390 | | Initial Hydro Mud Press. 2416 | |
| Initial Shut-in Press. 106 | | Initial Shut-in Press. 97 | |
| Initial Flow Press. 46 | | Initial Flow Press. 47 | |
| Final Flow Press. 51 | | Final Flow Press. 48 | |
| Final Shut-in Press. 99 | | Final Shut-in Press. 102 | |
| Final Hydro Mud Press. 2256 | | Final Hydro Mud Press. 2343 | |

| | | |
|----------------------|----------------------------|----------------|
| Temperature | Tool Open Before I.S.I. 10 | Mins. |
| Mud Drop 1' | Initial Shut-in 30 | Mins. |
| Mud Weight 10 #/gal. | Viscosity 42 cp | Flow Period 60 |
| Fluid Loss 9.6 cc | Final Shut-in 30 | Mins. |

| | | |
|--------------------------------|------------------------|------------------------|
| Interval Tested 4339' to 4355' | Surface Choke Size 1" | |
| Net Pay Tested | Bottom Choke Size 3/4" | |
| Top Packer Depth 4334' | Main Hole Size 7-7/8" | |
| Bottom Packer Depth 4339' | Rat Hole Size | |
| Total Depth 4355' | Feet Of Rat Hole | |
| Drill Pipe Size 4-1/2" FH | Wt. 16.60 | Type of Test Open hole |
| Drill Collar I.D. 2-1/4" | Ft. Run 150 | Cushion Amount—Type |
| Anchor Size 5-1/8" OD | Rubber Size 6-3/4" | |

Recovery—Total Feet 40

Recovered 40 Feet Of Drlg. fluid.

Recovered _____ Feet Of _____

Recovered _____ Feet Of _____

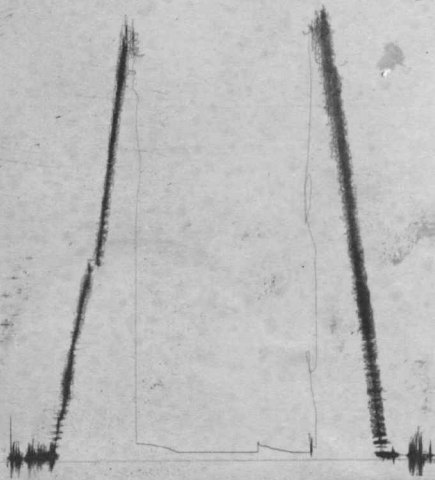
Recovered _____ Feet Of _____

Remarks

Weak blow thru - out test.

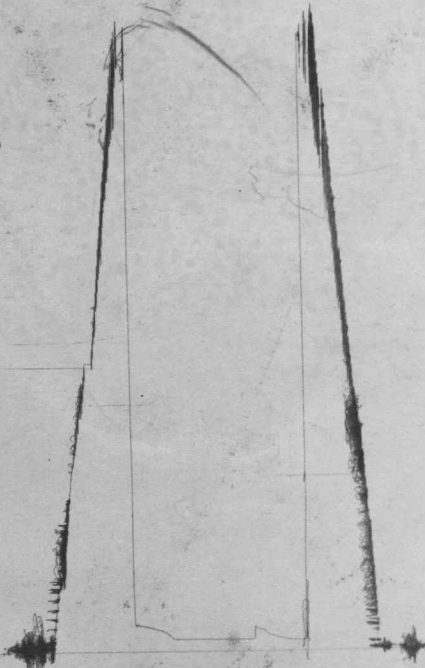
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ST-1058





DRILL-STEM TEST DATA

| | | | |
|-------------|------------------|-------------|-------------|
| Well Name | Barker "A" | Test No. | 5 |
| Well Number | 2 | Zone Tested | Arbuckle |
| Company | Bowers Drlg. Co. | Date | 4 - 29 - 67 |
| Comp. Rep. | Bob McCann | Tester | V. Williams |
| Contractor | Co. Tools | Ticket No. | ST - 1059 |
| Location | | Elevation | 1763 D.F. |

Recorder No. 2826 Clock Range 12 hr. Recorder No. 1055 Clock Range 12 hr.
 Depth 4408' Depth 4427'
 Initial Hydro Mud Press. 2472 Initial Hydro Mud Press. 2397
 Initial Shut-in Press. 1538 Initial Shut-in Press. 1541
 Initial Flow Press. 47 Initial Flow Press. 45
 Final Flow Press. 64 Final Flow Press. 56
 Final Shut-in Press. 1366 Final Shut-in Press. 1363
 Final Hydro Mud Press. 2508 Final Hydro Mud Press. 2371

Temperature _____ Tool Open Before I. S. I. 10 Mins.
 Mud Drop 1' Initial Shut-in 30 Mins.
 Mud Weight 10.1 #/gal. Viscosity 48 cp Flow Period 30 Mins.
 Fluid Loss 9.2 cc Final Shut-in 30 Mins.

Interval Tested 4421' to 4430' Surface Choke Size 1"
 Net Pay Tested 9' Bottom Choke Size 3/4"
 Top Packer Depth 4416' Main Hole Size 7-7/8"
 Bottom Packer Depth 4421' Rat Hole Size _____
 Total Depth 4430' Feet Of Rat Hole _____
 Drill Pipe Size 4-1/2 FH Wt. 16.60 Type of Test Open hole
 Drill Collar I. D. 2-1/4" Ft. Run 150 Cushion Amount—Type _____
 Anchor Size 5-1/2" OD Rubber Size 6-3/4"

Recovery—Total Feet _____
 Recovered 60 Feet Of Muddy water.
 Recovered _____ Feet Of _____
 Recovered _____ Feet Of _____
 Recovered _____ Feet Of _____

Remarks

Weak blow 10 min. flushed tool Weak blow 2 min.

Byron Jackson Inc.

Subject: Brine Analysis

Depth: 4430'

Formation: Arbuckle

Company Bowers Drlg. Co. Farm Barker "A" Well No. 2
 Location 35 - 27 - 12 County Pratt State Kansas Date 5-2-67
 Pool _____ Date Sampled 4-29-67 Submitted by V. Williams

SPECIFIC GRAVITY: 1.076

pH: 5

PRINCIPAL CONSTITUENTS

| RADICAL | PARTS PER MILLION | REACTING VALUE | |
|-------------|-------------------|-------------------------|----------|
| | | Equivalents Per Million | Per Cent |
| SODIUM | _____ | _____ | _____ |
| CALCIUM | <u>2,182</u> | _____ | _____ |
| MAGNESIUM | <u>1,092</u> | _____ | _____ |
| CHLORIDE | <u>70,900</u> | _____ | _____ |
| SULPHATE | <u>402</u> | _____ | _____ |
| BICARBONATE | <u>201</u> | _____ | _____ |

PRIMARY SALINITY: _____ PER CENT TOTAL REACTING VALUE
 SECONDARY SALINITY: _____ PER CENT TOTAL REACTING VALUE
 SECONDARY ALKALINITY: _____ PER CENT TOTAL REACTING VALUE

GENERAL REMARKS:

Hydroxide 0
 Carbonate 0

Well Data: (What is the problem? Acidized? etc.) New Well Sample recovered from DST.

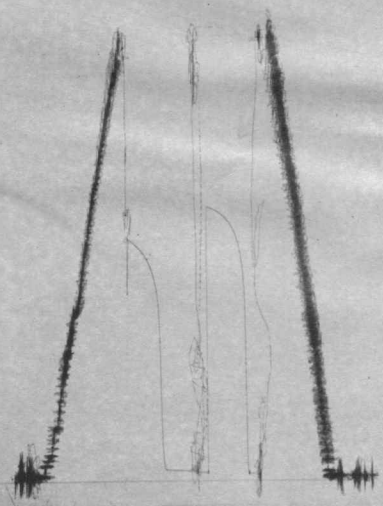
Specific Gravity 1.075 at 65 °F 1.076 Corrected to 60°F

| Size Sample and Titre | mg/L | ppm |
|---|---------------|---------------|
| Chlorides <u>38.1 X 10 X 1,000/5</u> | <u>76,200</u> | <u>70,900</u> |
| Sulphates <u>2.7 X 4,000/25</u> | <u>432</u> | <u>402</u> |
| Bicarbonates <u>8.8 X 20 X 1.22</u> | <u>215</u> | <u>201</u> |
| Calcium <u>4.6 X .511 X 1,000</u> | <u>2,351</u> | <u>2,182</u> |
| Magnesium <u>(8.5 - 4.5 X .511/.510) X 1,000 X .294</u> | <u>1,176</u> | <u>1,092</u> |

Lab No. _____
 District Great Bend
 Analyzed by JWM
 Distribution _____

2826

ST-1059



1055

ST-1059

