

Phone  
(303) 830-8080

# Star Hughes

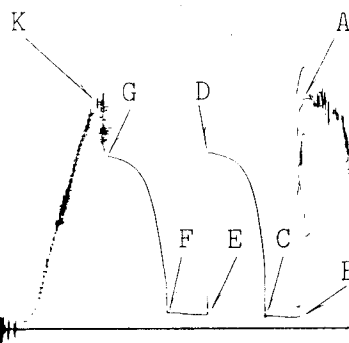
Denver Center Bldg.  
1776 Lincoln St., Suite 408  
Denver, CO 80203

Contractor <u>Graves Drlg.</u>	Surface Choke <u>1"</u>	Mud Type <u>Gel</u>
Rig No. <u>--</u>	Bottom Choke <u>5/8"</u>	Weight <u>9.6</u>
Spot <u>E/2-NE/SW</u>	Hole Size <u>7 7/8"</u>	Viscosity <u>33</u>
Sec. <u>8</u>	Core Hole Size <u>--</u>	Water Loss <u>--</u>
Twp. <u>31 S</u>	DP Size & Wt. <u>4 1/2" XH</u>	Filter Cake <u>--</u>
Rng. <u>14 W</u>	Wt. Pipe <u>--</u>	Resistivity <u>--</u> @ <u>--</u> <sup>OF</sup>
Field <u>--</u>	I.D. of DC <u>2 1/4"</u>	<u>--</u> Ppm. NaCl
County <u>Barber</u>	Length of DC <u>120'</u>	B.H.T. <u>98</u> <sup>OF</sup>
State <u>Kansas</u>	Total Depth <u>2756'</u>	Co. Rep. <u>Arden Ratzlaff</u>
Elevation <u>1643' KB</u>	Type Test <u>Conventional</u>	Tester <u>William Weaver</u>
Formation <u>--</u>	Interval <u>2690' - 2756'</u>	

REPORTED		CORRECTED
Opened Tool @	<u>10:05</u>	hrs.
Flow No. 1	<u>30</u>	min.
Shut-in No. 1	<u>45</u>	min.
Flow No. 2	<u>30</u>	min.
Shut-in No. 2	<u>45</u>	min.
Flow No. 3	<u>None Taken</u>	min.
Shut-in No. 3	<u>" "</u>	min.

Recorder Type <u>Kuster AK-1</u>	
No. <u>1553</u>	Cap. <u>4350</u> psi
Depth <u>2682</u>	feet
Inside X	Outside

Initial Hydrostatic	A	<u>1349</u>
Final Hydrostatic	K	<u>1336</u>
Initial Flow	B	<u>74</u>
Final Initial Flow	C	<u>78</u>
Initial Shut-in	D	<u>1041</u>
Second Initial Flow	E	<u>87</u>
Second Final Flow	F	<u>101</u>
Second Shut-in	G	<u>1019</u>
Third Initial Flow	H	
Third Final Flow	I	
Third Shut-in	J	



Pipe Recovery: 200' Total fluid = 1.72 bbl.  
100' Slightly gas cut mud = 1.23 bbl.  
100' Slightly gas cut muddy water = 0.49 bbl.

Surface blow:  
1st flow: Tool opened with a strong blow, increased to bottom of bucket in 4 minutes and remained through flow period.

2nd flow: Tool opened with a strong blow and remained through flow period. No gas to surface.

Operator  
Ticket No. 02299  
Date 10/31/83  
Graves Drilling Co., Inc.

Well Name & No. Dickinson #1  
Location E/2-NE/SW S-8 T-31S R-14W  
County, State Barber County, Kansas  
DST No. 1  
Interval 2690' - 2756'  
Formation Not Reported

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Denver Center Bldg.  
1776 Lincoln St., Suite 408  
Denver, CO 80203

Contractor Graves Drilling  
Rig No. --  
Spot E/2-NE/SW  
Sec. 8  
Twp. 31 S  
Rng. 14 W  
Field --  
County Barber  
State Kansas  
Elevation 1643' KB  
Formation --

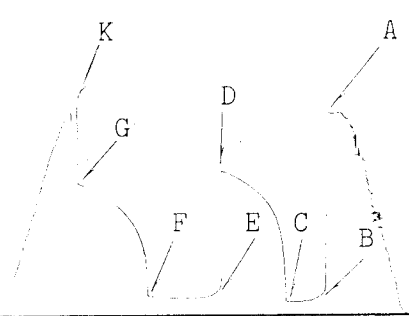
Surface Choke 1"  
Bottom Choke 5/8"  
Hole Size 7 7/8"  
Core Hole Size --  
DP Size & Wt. 4 1/2" XH  
Wt. Pipe --  
I.D. of DC 2 1/4"  
Length of DC 120'  
Total Depth 3010'  
Type Test Conventional  
Interval 2986' - 3010'

Mud Type Gel  
Weight 9.5  
Viscosity 33  
Water Loss 8.0  
Filter Cake 2/32  
Resistivity -- @ -- OF  
42,000 Ppm. NaCl  
B.H.T. 101 OF  
Co. Rep. Arden Ratzlapp  
Tester William Weaver

	REPORTED	CORRECTED
Opened Tool @	<u>03:05</u>	<u>hrs.</u>
Flow No. 1	<u>30</u>	<u>min.</u>
Shut-in No. 1	<u>45</u>	<u>min.</u>
Flow No. 2	<u>60</u>	<u>min.</u>
Shut-in No. 2	<u>45</u>	<u>min.</u>
Flow No. 3	<u>None Taken</u>	<u>min.</u>
Shut-in No. 3	<u>" "</u>	<u>min.</u>

Recorder Type Kuster AK-1  
No. 13635 Cap. 5600 psi  
Depth 3007 feet  
Inside Outside X

Initial Hydrostatic	A	<u>1467</u>
Final Hydrostatic	K	<u>1466</u>
Initial Flow	B	<u>148</u>
Final Initial Flow	C	<u>104</u>
Initial Shut-in	D	<u>1046</u>
Second Initial Flow	E	<u>167</u>
Second Final Flow	F	<u>146</u>
Second Shut-in	G	<u>960</u>
Third Initial Flow	H	<u></u>
Third Final Flow	I	<u></u>
Third Shut-in	J	<u></u>



Pipe Recovery: 380' Total fluid = 4.28 bbl.  
150' Oil & gas cut mud = 2.13 bbl.  
230' Slightly oil & gas cut water = 2.15 bbl.  
Recovery: 120,000 ppm. Cl.

Surface blow:  
1st flow: Tool opened with a strong blow. Gas to surface in 15 minutes; see gas volume report.  
2nd flow: Tool opened with gas to surface; see gas volume report.

Operator  
Ticket No. 02300  
Date 11/1/83

Graves Drilling Co., Inc.

Well Name & No. Dickinson #1  
Location E/2-NE/SW S-8 T-31S R-14W  
County, State Barber County, Kansas

DST No. 2  
Interval 2986' - 3010'  
Formation Not Reported

## GAS VOLUME REPORT

3  
DST No.

Remarks: Gas to surface 15 minutes into the first flow period.

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Contractor Graves Drilling  
Rig No. --  
Spot E/2-NE/SW  
Sec. 8  
Twp. 31 S  
Rng. 14 W  
Field --  
County Barber  
State Kansas  
Elevation 1643' KB  
Formation --

Surface Choke 1"  
Bottom Choke 5/8"  
Hole Size 7 7/8"  
Core Hole Size --  
DP Size & Wt. 4 1/2" XH  
Wt. Pipe --  
I.D. of DC 2 1/4"  
Length of DC 120'  
Total Depth 3210'  
Type Test Conventional  
Interval 3177' - 3210'

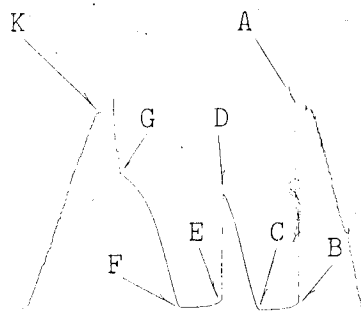
Mud Type Gel  
Weight 9.2  
Viscosity 34  
Water Loss --  
Filter Cake 2/32  
Resistivity -- @ -- OF  
28.000 Ppm. NaCl  
B.H.T. 104 OF  
Co. Rep. Arden Ratzlapp  
Tester William Weaver

	REPORTED	CORRECTED
Opened Tool @	<u>09:35</u>	hrs.
Flow No. 1	<u>30</u>	min.
Shut-in No. 1	<u>45</u>	min.
Flow No. 2	<u>30</u>	min.
Shut-in No. 2	<u>45</u>	min.
Flow No. 3	<u>None Taken</u>	min.
Shut-in No. 3	<u>" "</u>	min.

Recorder Type Kuster AK-1  
No. 13635 Cap. 5600 psi  
Depth 3169 feet

Inside X Outside

Initial Hydrostatic	A	<u>1522</u>
Final Hydrostatic	K	<u>1517</u>
Initial Flow	B	<u>102</u>
Final Initial Flow	C	<u>63</u>
Initial Shut-in	D	<u>909</u>
Second Initial Flow	E	<u>126</u>
Second Final Flow	F	<u>87</u>
Second Shut-in	G	<u>1065</u>
Third Initial Flow	H	
Third Final Flow	I	
Third Shut-in	J	



Pipe Recovery: 180' Slightly gas cut muddy water = 1.44 bbl. (no oil shows)  
Recovery: 92,000 ppm. Cl.

Surface blow:  
1st flow: Tool opened with a strong blow and remained through flow period.  
2nd flow: Tool opened with a strong blow and remained through flow period.

Operator  
Ticket No. 02301  
Date 11/1/83  
Graves Drilling Co., Inc.

Well Name & No. Dickinson #1  
Location E/2-NE/SW S-8 T-31S R-14W  
County, State Barber County, Kansas

DST No. 3  
Interval 3177' - 3210'  
Formation Not Reported

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Contractor Graves Drilling  
Rig No. --  
Spot E/2-NE/SW  
Sec. 8  
Twp. 31 S  
Rng. 14 W  
Field --  
County Barber  
State Kansas  
Elevation 1643' KB  
Formation --

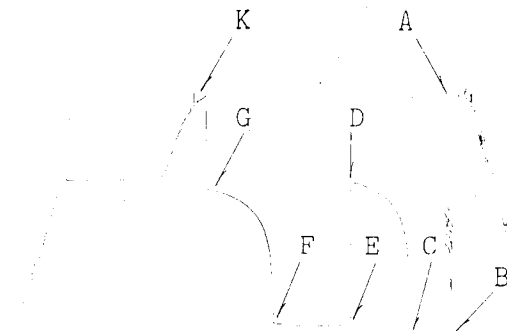
Surface Choke 1"  
Bottom Choke 5/8"  
Hole Size 7 7/8"  
Core Hole Size --  
DP Size & Wt. 4 1/2" XH  
Wt. Pipe --  
I.D. of DC 2 1/4"  
Length of DC 120'  
Total Depth 3656'  
Type Test Conventional  
Interval 3630' - 3656'

Mud Type Gel  
Weight 9.3  
Viscosity 33  
Water Loss --  
Filter Cake 2/32  
Resistivity -- @ °F  
24,000 Ppm. NaCl  
B.H.T. 105 °F  
Co. Rep. Arden Ratzlaff  
Tester William Weaver

	REPORTED	CORRECTED
Opened Tool @	<u>01:00</u>	hrs.
Flow No. 1	<u>30</u>	min.
Shut-in No. 1	<u>45</u>	min.
Flow No. 2	<u>60</u>	min.
Shut-in No. 2	<u>45</u>	min.
Flow No. 3	<u>None Taken</u>	min.
Shut-in No. 3	<u>" "</u>	min.

Recorder Type Kuster AK-1  
No. 13635 Cap. 5600 psi  
Depth 3622 feet  
Inside X Outside

Initial Hydrostatic	A	<u>1816</u>
Final Hydrostatic	K	<u>1799</u>
Initial Flow	B	<u>89</u>
Final Initial Flow	C	<u>85</u>
Initial Shut-in	D	<u>1199</u>
Second Initial Flow	E	<u>183</u>
Second Final Flow	F	<u>175</u>
Second Shut-in	G	<u>1153</u>
Third Initial Flow	H	
Third Final Flow	I	
Third Shut-in	J	



Pipe Recovery: 360' Muddy water

Middle sample: 86,000 ppm. Cl.

Surface blow:

1st flow:

Tool opened with a strong blow, increased to bottom of bucket in 20 minutes and remained through flow period.

2nd flow:

Tool opened with a strong blow, increased to bottom of bucket in 30 minutes and remained through flow period.

Operator  
Ticket No.

Graves Drilling Co., Inc.  
02302  
11/3/83

Well Name & No.  
Location  
County, State

Dickinson #1  
E/2-NE/SW S-8 T-31S  
Barber County, Kansas

DST No. 4  
Interval 3630' - 3656'  
Formation Not Reported

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Contractor Graves Drilling  
Rig No. --  
Spot E/2-NE/SW  
Sec. 8  
Twp. 31 S  
Rng. 14 W  
Field --  
County Barber  
State Kansas  
Elevation 1643' KB  
Formation Viola

Surface Choke 1 1/2"  
Bottom Choke 5/8"  
Hole Size 7 7/8"  
Core Hole Size --  
DP Size & Wt. 4 1/2" XH  
Wt. Pipe --  
I.D. of DC 2 1/4"  
Length of DC 120'  
Total Depth 4400'  
Type Test Conventional  
Interval 4379'- 4400'

Mud Type Gel  
Weight 9.2  
Viscosity 46  
Water Loss 9.5  
Filter Cake 2/32  
Resistivity -- @ -- OF  
10,000 Ppm. NaCl  
B.H.T. 122 OF  
Co. Rep. Arden Ratzlaff  
Tester William Weaver

	REPORTED	CORRECTED
Opened Tool @	<u>03:15</u>	hrs.
Flow No. 1	<u>15</u>	min.
Shut-in No. 1	<u>45</u>	min.
Flow No. 2	<u>None Taken</u>	min.
Shut-in No. 2	<u>" "</u>	min.
Flow No. 3	<u>" "</u>	min.
Shut-in No. 3	<u>" "</u>	min.

Recorder Type Kuster AK-1  
No. 13635 Cap. 5600 psi  
Depth 4371 feet  
Inside X Outside

Initial Hydrostatic	A	<u>2195</u>
Final Hydrostatic	K	<u>2167</u>
Initial Flow	B	<u>1053</u>
Final Initial Flow	C	<u>1065</u>
Initial Shut-in	D	<u>1509</u>
Second Initial Flow	E	
Second Final Flow	F	
Second Shut-in	G	
Third Initial Flow	H	
Third Final Flow	I	
Third Shut-in	J	

Pipe Recovery:

Test flowed gas & oil (reverse circulated)

Gravity: 37.0° API @ 60° F

Surface blow:

1st flow:

Tool opened with a strong blow, gas to surface in 3 minutes, increased to 7.0 psig on a 1 1/2" orifice in 5 minutes = 1,036.0 MCFPD. Oil to surface in 7 minutes.

Remarks:

At the conclusion of the shut-in period (D on chart) the tool was picked up enough to open the bypass and allow hydrostatic to fill the interval below the packers with mud. The decision was then made to leave the tool on bottom until a rig supervisor could be asked about reverse circulating the recovered fluid. The tool was then set back on bottom with enough weight to open the hydraulic tool, however the shut-in tool was closed. The downward force on the packers caused compression of the fluid below the packers which resulted in the appearance of a build-up curve (X on chart). The curve at point "X" is not significant or pertinent to the results of the test.

Operator  
Ticket No.

Graves Drilling Co., Inc.  
02303  
11/5/83

Well Name & No.  
Location  
County, State

Dickinson #1  
E/2-NE/SW S-8  
Barber County, Kansas  
T-31S R-14W

DST No. 5  
Interval 4379'- 4400'  
Formation Viola

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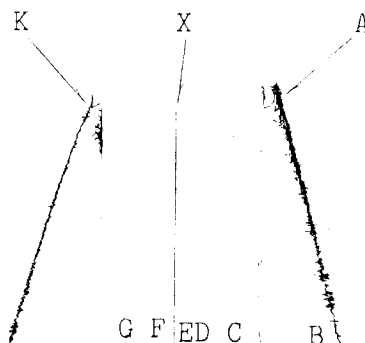
Denver Center Bldg.  
1776 Lincoln St., Suite 408  
Denver, CO 80203

Contractor <u>Graves Drilling</u>	Surface Choke <u>1"</u>	Mud Type <u>Gel</u>
Rig No. <u>--</u>	Bottom Choke <u>1/2"</u>	Weight <u>9.0</u>
Spot <u>E/2-NE/SW</u>	Hole Size <u>7 7/8"</u>	Viscosity <u>43</u>
Sec. <u>8</u>	Core Hole Size <u>--</u>	Water Loss <u>12.9</u>
Twp. <u>31 S</u>	DP Size & Wt. <u>4 1/2" XH</u>	Filter Cake <u>2/32</u>
Rng. <u>14 W</u>	Wt. Pipe <u>--</u>	Resistivity <u>-- @</u> <u>11,000</u> <u>Ppm. NaCl</u> <u>OF</u>
Field <u>--</u>	I.D. of DC <u>2 1/4"</u>	B.H.T. <u>120</u> <u>OF</u>
County <u>Barber</u>	Length of DC <u>120'</u>	Co. Rep. <u>Arden Ratzlaff</u>
State <u>Kansas</u>	Total Depth <u>4473'</u>	Tester <u>William Weaver</u>
Elevation <u>1643' KB</u>	Type Test <u>Conventional</u>	
Formation <u>Simpson</u>	Interval <u>4450' - 4473'</u>	

REPORTED		CORRECTED	
Opened Tool @	<u>03:20</u>	hrs.	
Flow No. 1	<u>30</u>	min.	
Shut-in No. 1	<u>30</u>	min.	
Flow No. 2	<u>30</u>	min.	
Shut-in No. 2	<u>30</u>	min.	
Flow No. 3	<u>None Taken</u>	min.	
Shut-in No. 3	<u>" "</u>	min.	

Recorder Type <u>Kuster AK-1</u>	
No. <u>13635</u>	Cap. <u>5600</u> psi
Depth <u>4442</u> feet	
Inside <u>X</u>	Outside

Initial Hydrostatic	A	<u>2123</u>
Final Hydrostatic	K	<u>2129</u>
Initial Flow	B	<u>102</u>
Final Initial Flow	C	<u>41</u>
Initial Shut-in	D	<u>46</u>
Second Initial Flow	E	<u>49</u>
Second Final Flow	F	<u>45</u>
Second Shut-in	G	<u>42</u>
Third Initial Flow	H	
Third Final Flow	I	
Third Shut-in	J	



Pipe Recovery: 15' Drilling mud = 0.07 bbl.

Surface blow:

1st flow: Tool opened with a weak blow, died in 15 minutes and remained through flow period.

2nd flow:

Tool opened with no blow; bypassed tool (X on chart) reopened with a surge, died and remained through flow period.

Operator  
Ticket No.

Graves Drilling Co., Inc.  
02304  
11/6/83

Well Name & No.  
Location  
County, State

Dickinson #1  
E/2-NE/SW S-8 T-31S  
Barber County, Kansas  
R-14W

DST No. 6  
Interval 4450' - 4473'  
Formation Simpson

Phone  
(303) 830-8080

# Star Hughes

Denver Center Bldg.  
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Denver, CO 80203

Contractor Graves Drilling  
Rig No. --  
Spot E/2-NE/SW  
Sec. 8  
Twp. 31 S  
Rng. 14 W  
Field --  
County Barber  
State Kansas  
Elevation 1043' KB  
Formation --

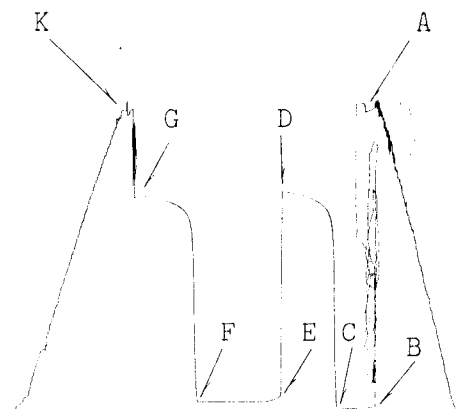
Surface Choke 1"  
Bottom Choke 5/8"  
Hole Size 7 7/8"  
Core Hole Size --  
DP Size & Wt. 4 1/2" XH  
Wt. Pipe --  
I.D. of DC 2 1/4"  
Length of DC 120'  
Total Depth 4573'  
Type Test Conventional  
Interval 4557' - 4573'

Mud Type Gel  
Weight 9.2  
Viscosity 50  
Water Loss 12.5  
Filter Cake 2/32  
Resistivity -- @ -- of  
11,000 Ppm. NaCl  
B.H.T. 123 of  
Co. Rep. Arden Ratzlaff  
Tester William Weaver

	REPORTED	CORRECTED
Opened Tool@	<u>01:00</u>	<u>hrs.</u>
Flow No. 1	<u>30</u>	<u>min.</u>
Shut-in No. 1	<u>45</u>	<u>min.</u>
Flow No. 2	<u>60</u>	<u>min.</u>
Shut-in No. 2	<u>45</u>	<u>min.</u>
Flow No. 3	<u>None Taken</u>	<u>min.</u>
Shut-in No. 3	<u>" "</u>	<u>min.</u>

Recorder Type Kuster AK-1  
No. 13635 Cap. 5600 psi  
Depth 4549 feet  
Inside X Outside

Initial Hydrostatic	A	<u>2204</u>
Final Hydrostatic	K	<u>2207</u>
Initial Flow	B	<u>56</u>
Final Initial Flow	C	<u>50</u>
Initial Shut-in	D	<u>1622</u>
Second Initial Flow	E	<u>120</u>
Second Final Flow	F	<u>94</u>
Second Shut-in	G	<u>1595</u>
Third Initial Flow	H	<u></u>
Third Final Flow	I	<u></u>
Third Shut-in	J	<u></u>



Pipe Recovery: 210' Total fluid = 1.87 bbl.  
30' Oil = 0.43 bbl.  
60' Oil cut mud = 0.85 bbl.  
120' Slightly oil cut, muddy water = 0.59 bbl.  
Oil gravity: 23.0° API @ 60° F

Surface blow:  
1st flow: Tool opened with a weak, 3/4" blow and remained through flow period.  
2nd flow: Tool opened with a weak, 3/4" blow and remained through flow period.

Operator Graves Drilling Co., Inc.  
Ticket No. 02305  
Date 11/7/83

Well Name & No. Dickinson #1  
Location E/2-NE/SW S-8 T-31S R-14W  
County, State Barber County, Kansas

DST No. 7  
Interval 4557' - 4573'  
Formation Not Reported