

15-063-21819

29-13s-31w



DRILL STEM TEST REPORT

Prepared For: **RITCHIE EXPLORATION INC**

8100 E 22ND ST N #700
WITCHITA KS 67278

ATTN: JEFF CHRISTIAN

29-13-31W GOVE

HESS 29A #2

Start Date: 2009.12.05 @ 11:17:00

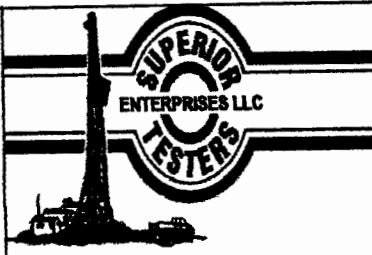
End Date: 2009.12.05 @ 17:43:30

Job Ticket #: 16187 DST #: 1

Superior Testers Enterprises LLC
PO Box 138 Great Bend KS 67530
1-800-792-6902

Printed: 2009.12.08 @ 14:15:56

RITCHIE EXPLORATION INC
HESS 29A #2
29-13-31W GOVE
DST # 1
LKC "H"
2009.12.05



DRILL STEM TEST REPORT

RITCHE EXPLORATION INC

HESS 29A #2

8100 E 22ND ST N #700
WITCHITA KS 67278

29-13-31W GOVE

Job Ticket: 16187

DST#: 1

ATTN: JEFF CHRISTIAN

Test Start: 2009.12.05 @ 11:17:00

GENERAL INFORMATION:

Formation: LKC "H"
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 13:11:30
 Time Test Ended: 17:43:30

Test Type: Conventional Bottom Hole (Initial)
 Tester: JARED SCHECK
 Unit No: 3320 -65 -SCOTT CITY

Interval: 4065.00 ft (KB) To 4090.00 ft (KB) (TVD)
 Total Depth: 4090.00 ft (KB) (TVD)
 Hole Diameter: 6.88 inches Hole Condition: Fair

Reference Elevations: 2862.00 ft (KB)
 2856.00 ft (CF)
 KB to GR/CF: 6.00 ft

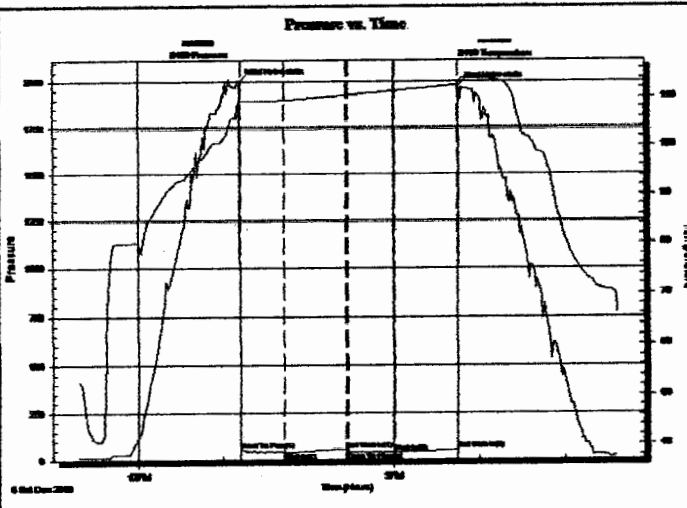
Serial #: 8419

Outside

Press@RunDepth: 51.99 psia @ 4085.00 ft (KB)
 Start Date: 2009.12.05 End Date: 2009.12.05
 Start Time: 11:18:00 End Time: 17:36:30

Capacity: 5000.00 psia
 Last Calib.: 2009.12.06
 Time On Btm: 2009.12.05 @ 13:11:30
 Time Off Btm: 2009.12.05 @ 15:45:30

TEST COMMENT: 30/INITIAL OPEN:WEAK SURFACE BLOW BUILT 3/4 INCH INTO WATER IN 30 MINUTES
 45/INITIAL SHUT IN:NO BLOW BACK
 30/FINAL OPEN:BLOW DIED OFF
 45/FINAL SHUT IN:NO BLOW BACK



PRESSURE SUMMARY

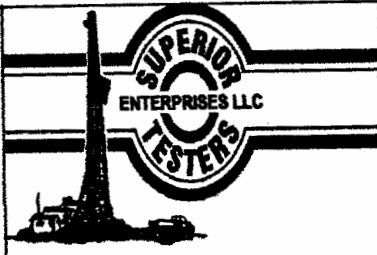
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	2002.76	109.17	Initial Hydro-static
1	53.85	109.09	Open To Flow (1)
32	39.48	109.36	Shut-in(1)
75	56.18	110.41	End Shut-in(1)
76	39.72	110.42	Open To Flow (2)
109	39.88	111.33	Shut-in(2)
153	51.99	112.49	End Shut-in(2)
154	1978.10	113.09	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	MUD	0.02

Gas Rates

Choke (inches)	Pressure (psia)	Gas Rate (Mcf/d)



DRILL STEM TEST REPORT

TOOL DIAGRAM

RITCHE EXPLORATION INC

HESS 29A #2

8100 E 22ND ST N #700
WITCHITA KS 67278

29-13-31W GOVE

Job Ticket: 16187

DST#: 1

ATTN: JEFF CHRISTIAN

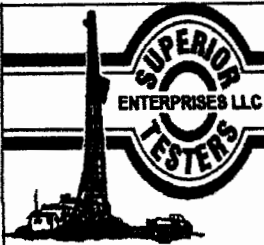
Test Start: 2009.12.05 @ 11:17:00

Tool Information

Drill Pipe:	Length: 3914.00 ft	Diameter: 3.80 inches	Volume: 54.90 bbl	Tool Weight: 10000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 150.00 ft	Diameter: 2.25 inches	Volume: 0.74 bbl	Weight to Pull Loose: 73000.00 lb
			<u>Total Volume: 55.64 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial 54000.00 lb
Depth to Top Packer:	4065.00 ft			Final 54000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	25.00 ft			
Tool Length:	46.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4045.00	
Shut-In Tool	5.00			4050.00	
Hydrolic Tool	5.00			4055.00	
Packer	5.00			4060.00	21.00 Bottom Of Top Packer
Packer	5.00			4065.00	
Perforations	20.00			4085.00	
Recorder	0.00	8524	Inside	4085.00	
Recorder	0.00	8419	Outside	4085.00	
Bullnose	5.00			4090.00	25.00 Bottom Packers & Anchor
Total Tool Length:	46.00				



DRILL STEM TEST REPORT

FLUID SUMMARY

RITCHIE EXPLORATION INC

HESS 29A #2

8100 E 22ND ST N #700
WICHITA KS 67278

29-13-31W GOVE

Job Ticket: 16187

DST#: 1

ATTN: JEFF CHRISTIAN

Test Start: 2009.12.05 @ 11:17:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 57.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.39 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psia

Salinity: 1400.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	MUD	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

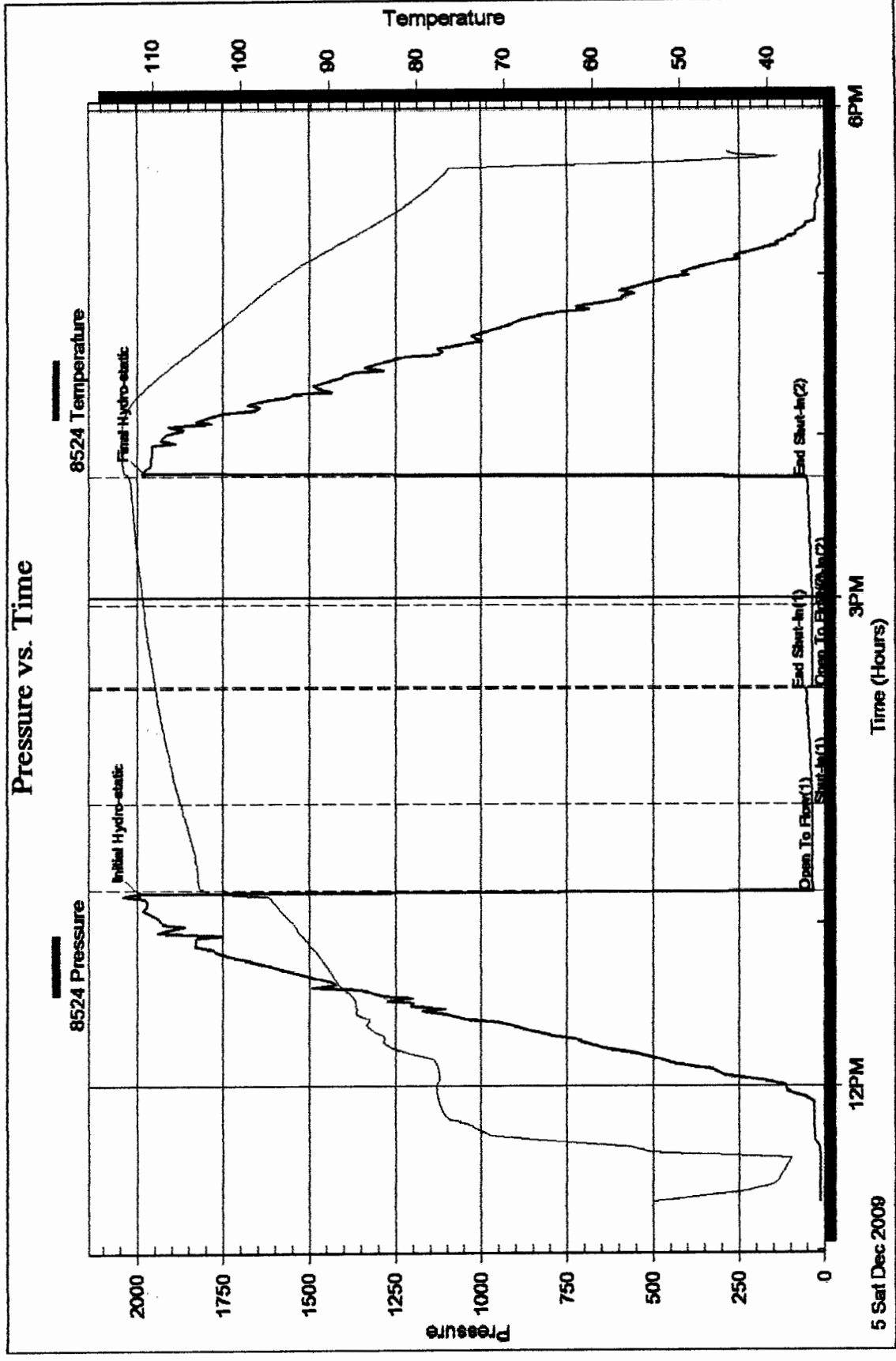
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Inside

RITCHEE EXPLORATION INC

29-13-31W GOVE

DST Test Number: 1

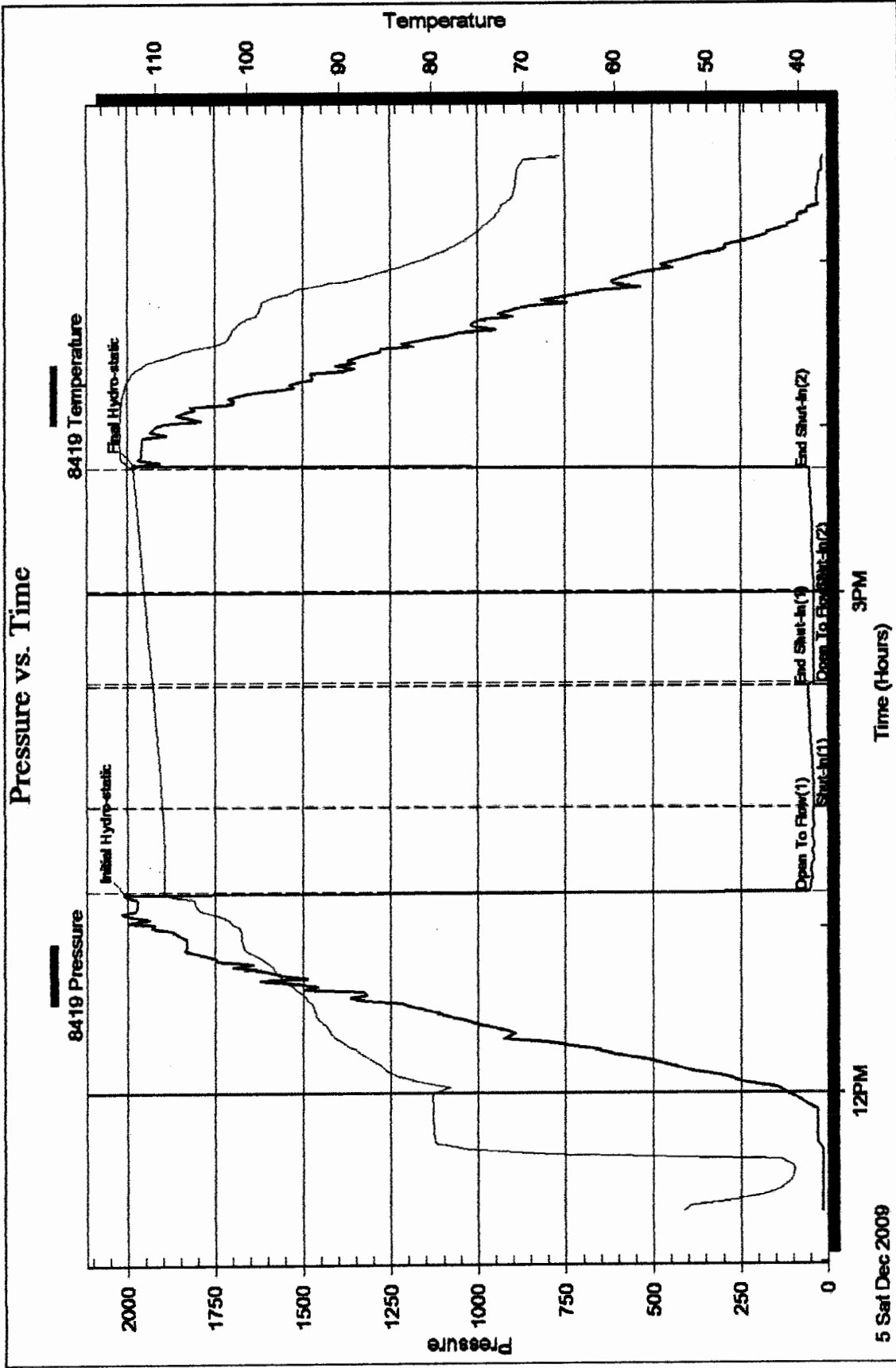


Serial #: 8419

Outside RITCHEX EXPLORATION INC

29-13-31W GOVE

DST Test Number: 1





DRILL STEM TEST REPORT

Prepared For: **RITCHIE EXPLORATION INC**

8100 E 22ND ST N #700
WITCHITA KS 67278

ATTN: JEFF CHRISTIAN

29-13-31W GOVE

HESS 29A #2

Start Date: 2009.12.07 @ 22:15:00

End Date: 2009.12.08 @ 05:39:00

Job Ticket #: 16188 DST #: 2

Superior Testers Enterprises LLC
PO Box 138 Great Bend KS 67530
1-800-792-6902

Printed: 2009.12.08 @ 14:15:20

RITCHIE EXPLORATION INC

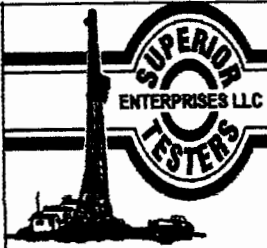
HESS 29A #2

29-13-31W GOVE

DST # 2

MORROW SAND

2009.12.07



DRILL STEM TEST REPORT

RITCHE EXPLORATION INC

HESS 29A #2

8100 E 22ND ST N #700
WICHITA KS 67278

29-13-31W GOVE

Job Ticket: 16188

DST#: 2

ATTN: JEFF CHRISTIAN

Test Start: 2009.12.07 @ 22:15:00

GENERAL INFORMATION:

Formation: **MORROW SAND**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 00:13:30
 Time Test Ended: 05:39:00

Test Type: Bottom Hole (Initial)
 Tester: JARED SCHECK
 Unit No: 3320-60 - SCOTT CITY

Interval: **4505.00 ft (KB) To 4557.00 ft (KB) (TVD)**
 Total Depth: **4557.00 ft (KB) (TVD)**
 Hole Diameter: 6.88 inches Hole Condition: Fair

Reference Elevations: 2862.00 ft (KB)
 2856.00 ft (CF)
 KB to GRVCF: 6.00 ft

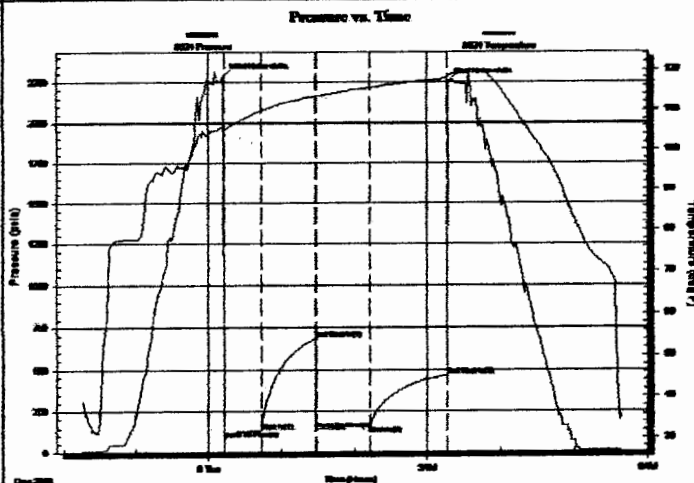
Serial #: 8524

Inside

Press@RunDepth: 157.88 psia @ 4552.00 ft (KB)
 Start Date: 2009.12.07 End Date: 2009.12.08
 Start Time: 22:16:00 End Time: 05:39:00

Capacity: 5000.00 psia
 Last Calib.: 2009.12.08
 Time On Btm: 2009.12.08 @ 00:12:30
 Time Off Btm: 2009.12.08 @ 03:17:00

TEST COMMENT: 30/INITIAL OPEN FAIR BLOW BUILT 4 INCHES FROM BOTTOM OF BUCKET IN 30 MINUTES
 45/INITIAL OPEN VERY WEAK SUFACE BLOW
 45/FINAL OPEN WEAK BUT BUILDING BLOW BUILT 5 INCHES INTO BUCKET IN 45 MINUTES
 60/FINAL SHUT IN VERY WEAK



PRESSURE SUMMARY

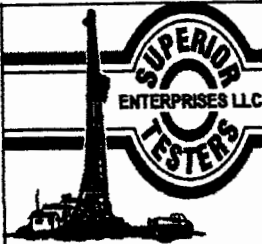
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	2285.13	105.76	Initial Hydro-static
1	78.61	105.39	Open To Flow (1)
31	133.61	109.84	Shut-In(1)
76	684.23	113.47	End Shut-In(1)
77	137.91	113.39	Open To Flow (2)
121	157.88	115.53	Shut-In(2)
184	466.22	117.83	End Shut-In(2)
185	2249.41	118.43	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	WATER 90%W 10%M	0.30
90.00	MUD CUT WATER 50%M 50%W	0.44
90.00	WATER CUT MUD 10%W 90%M	1.26

Gas Rates

Choke (inches)	Pressure (psia)	Gas Rate (Mc/d)



DRILL STEM TEST REPORT

RITCHE EXPLORATION INC

HESS 29A #2

8100 E 22ND ST N #700
WITCHITA KS 67278

29-13-31W GOVE

Job Ticket: 16188

DST#: 2

ATTN: JEFF CHRISTIAN

Test Start: 2009.12.07 @ 22:15:00

GENERAL INFORMATION:

Formation: **MORROW SAND**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 00:13:30
 Time Test Ended: 05:39:00

Test Type: Bottom Hole (Initial)
 Tester: JARED SCHECK
 Unit No: 3320-60 - SCOTT CITY

Interval: **4505.00 ft (KB) To 4557.00 ft (KB) (TVD)**
 Total Depth: **4557.00 ft (KB) (TVD)**
 Hole Diameter: 6.88 inches Hole Condition: Fair

Reference Elevations: 2862.00 ft (KB)
 2856.00 ft (CF)
 KB to GR/CF: 6.00 ft

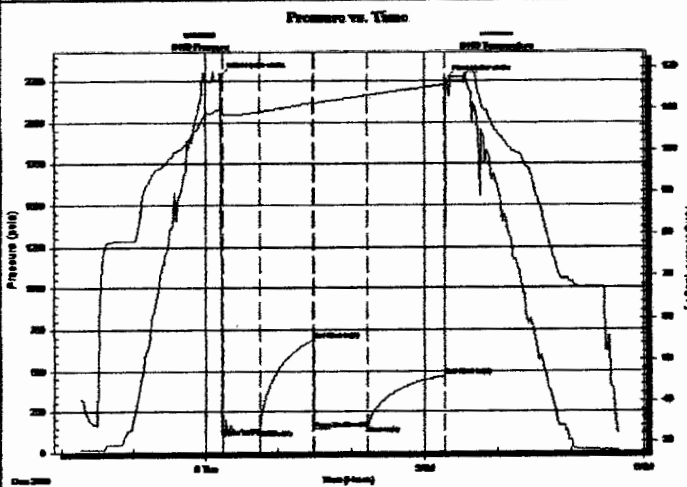
Serial #: 8419

Outside

Press@RunDepth: 467.79 psia @ 4552.00 ft (KB)
 Start Date: 2009.12.07 End Date: 2009.12.08
 Start Time: 22:16:00 End Time: 05:40:00

Capacity: 5000.00 psia
 Last Calib.: 2009.12.08
 Time On Btm: 2009.12.08 @ 00:12:30
 Time Off Btm: 2009.12.08 @ 03:18:00

TEST COMMENT: 30/INITIAL OPEN:FAIR BLOW BUILT 4 INCHES FROM BOTTOM OF BUCKET IN 30 MINUTES
 45/INITIAL OPEN:VERY WEAK SURFACE BLOW
 45/FINAL OPEN:WEAK BUT BUILDING BLOW BUILT 5 INCHES INTO BUCKET IN 45 MINUTES
 60/FINAL SHUT IN:VERY WEAK



PRESSURE SUMMARY

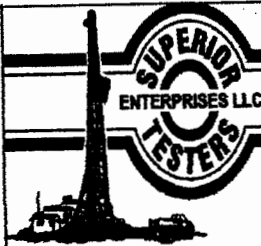
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	2287.70	109.63	Initial Hydro-static
2	87.85	108.81	Open To Flow (1)
32	137.38	109.21	Shut-In (1)
76	685.67	111.41	End Shut-in (1)
77	142.21	111.31	Open To Flow (2)
121	161.04	113.16	Shut-in (2)
184	467.79	115.64	End Shut-in (2)
186	2260.01	116.27	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	WATER 90%W 10%M	0.30
90.00	MUD CUT WATER 50%M 50%W	0.44
90.00	WATER CUT MUD 10%W 90%M	1.26

Gas Rates

	Choke (inches)	Pressure (psia)	Gas Rate (Mcf/d)



DRILL STEM TEST REPORT

TOOL DIAGRAM

RITCHE EXPLORATION INC

HESS 29A #2

8100 E 22ND ST N #700
WITCHITA KS 67278

29-13-31W GOVE

Job Ticket: 16188

DST#: 2

ATTN: JEFF CHRISTIAN

Test Start: 2009.12.07 @ 22:15:00

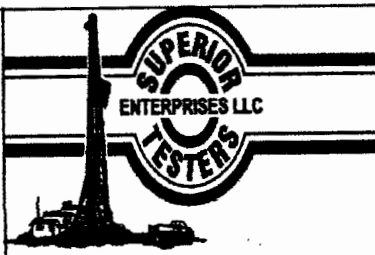
Tool Information

Drill Pipe:	Length: 4357.00 ft	Diameter: 3.80 inches	Volume: 61.12 bbl	Tool Weight: 10000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 150.00 ft	Diameter: 2.25 inches	Volume: 0.74 bbl	Weight to Pull Loose: 90000.00 lb
			<u>Total Volume: 61.86 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	23.00 ft			String Weight: Initial 55000.00 lb
Depth to Top Packer:	4505.00 ft			Final 56000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	52.00 ft			
Tool Length:	73.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4485.00	
Shut-in Tool	5.00			4490.00	
Hydraulic Tool	5.00			4495.00	
Packer	5.00			4500.00	21.00 Bottom Of Top Packer
Packer	5.00			4505.00	
Change Over Sub	0.75			4505.75	
Drill Pipe	32.50			4538.25	
Change Over Sub	0.75			4539.00	
Perforations	13.00			4552.00	
Recorder	0.00	8524	Inside	4552.00	
Recorder	0.00	8419	Outside	4552.00	
Bullnose	5.00			4557.00	52.00 Bottom Packers & Anchor

Total Tool Length: 73.00



DRILL STEM TEST REPORT

FLUID SUMMARY

RITCHE EXPLORATION INC

HESS 29A #2

8100 E 22ND ST N #700
WITCHITA KS 67278

29-13-31W GOVE

Job Ticket: 16188

DST#: 2

ATTN: JEFF CHRISTIAN

Test Start: 2009.12.07 @ 22:15:00

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 53.00 sec/qt
Water Loss: 6.40 in³
Resistivity: ohm.m
Salinity: 2500.00 ppm
Filter Cake: 1.00 inches

Cushion Type:
Cushion Length: ft
Cushion Volume: bbl
Gas Cushion Type:
Gas Cushion Pressure: psia

Oil API: deg API
Water Salinity: ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
60.00	WATER 90%W 10%M	0.295
90.00	MUD CUT WATER 50%M 50%W	0.443
90.00	WATER CUT MUD 10%W 90%M	1.262

Total Length: 240.00 ft Total Volume: 2.000 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RUINED PACKER C⁻HLORIDES 23,000

Serial #: 8524

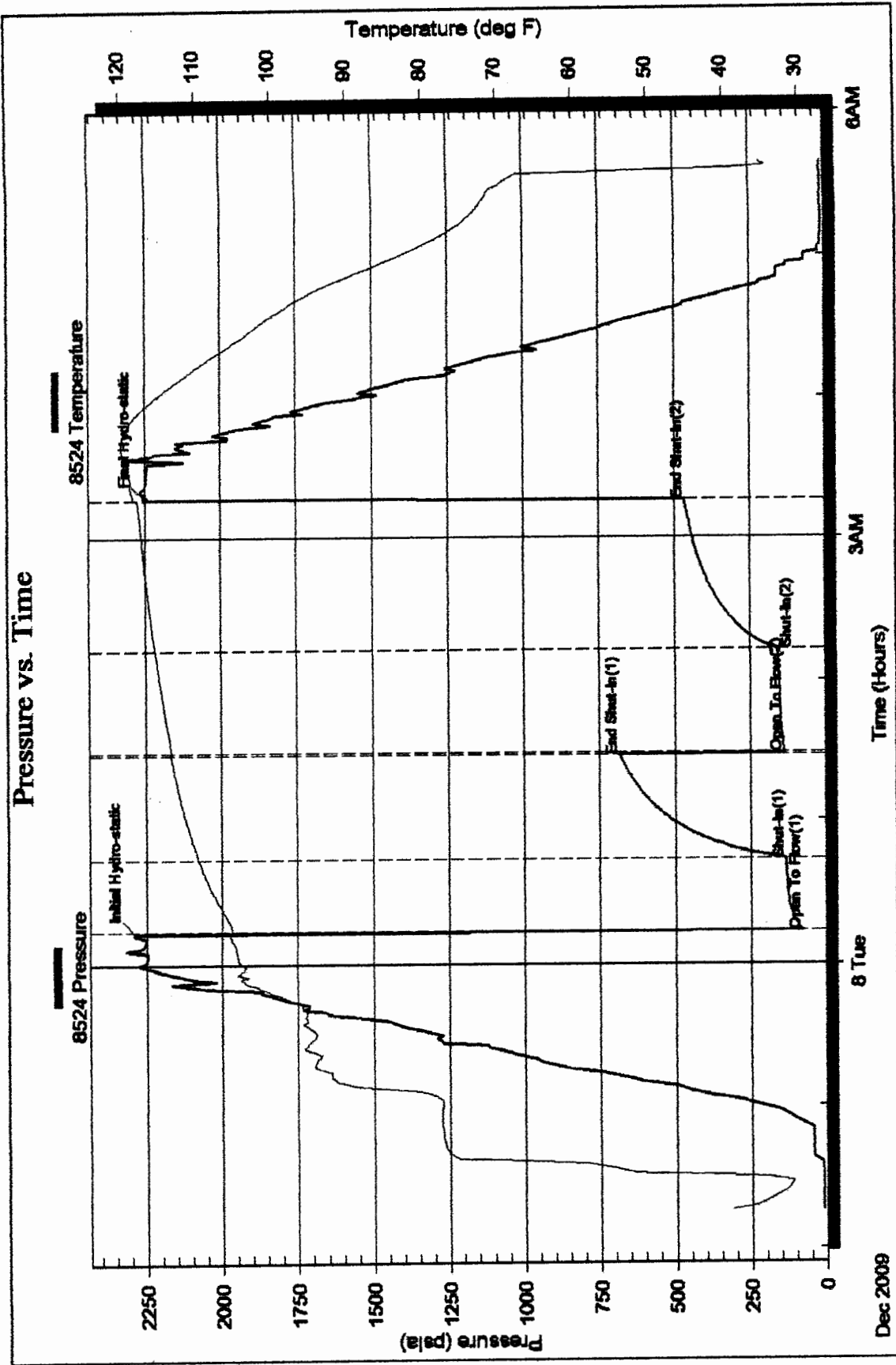
Inside

RITCHE EXPLORATION INC

29-13-31W GOVE

DST Test Number: 2

Pressure vs. Time



Printed: 2009.12.08 @ 14:23:11

Ref. No: 16188

Superior Testers Enterprises LLC