

ORIGINAL

STATE CORPORATION COMMISSION OF KANSAS  
OIL & GAS CONSERVATION DIVISION  
WELL COMPLETION FORM  
ACG-1 WELL HISTORY  
DESCRIPTION OF WELL AND LEASE

API NO. 15- 071-20604

County Greeley

N2 - SW - SW - NE Sec. 2 Twp. 18S Rge. 43 X<sup>E</sup>

2,145' Feet from S/4 (circle one) Line of Section

2,310' Feet from E/4 (circle one) Line of Section

Footages Calculated from Nearest Outside Section Corner:  
NE, SE, NW or SW (circle one)

Operator: License # 31155

Name: Axem Resources Incorporated

Address 7800 E. Union Avenue, Suite 1100

City/State/Zip Denver, CO 80237

Purchaser: Oil - Marathon

Operator Contact Person: Terry Hoffman

Phone ( 303 ) 740-9000

Contractor: Name: Murfin Drilling Co., Inc.

License: 30606

Wellsite Geologist: Scott Banks

Lease Name Bobcat Well # 1-2

Field Name Moore-Johnson Extension

Producing Formation Morrow

Elevation: Ground 3,888' vs 3,897'

Total Depth 5,280' PSTD 5,226'

Amount of Surface Pipe Set and Cemented at 309' Feet

Multiple Stage Cementing Collar Used? X Yes      No

If yes, show depth set 1,975' Feet

If Alternate II completion, cement circulated from 1,975'

feet depth to Surface w/ 350 sz cat. ✓

Designate Type of Completion

X New Well      Re-Entry      Workover

X Oil      SWD      SIOW      Temp. Abd.

     Gas      ENHR      SIW

     Dry      Other (Core, WSW, Expl., Cathodic, etc)

Drilling Fluid Management Plan ART II 4-22-94 DPW  
(Data must be collected from the Reserve Pit)

Chloride content 45 ppm Fluid volume 3,500 bbls

Dewatering method used Evaporation

Location of fluid disposal if hauled offsite:

Operator Name     

Lease Name      License No.     

     Quarter      Sec.      Twp.      S Rng.      E/W

County      Docket No.     

If Workover/Re-Entry: old well info as follows:

Operator:     

Well Name:     

Comp. Date      Old Total Depth     

     Deepening      Re-perf.      Conv. to Inj/SWD

     Plug Back      PSTD

     Cemented      Docket No.     

     Dual Completion      Docket No.     

     Other (SWD or Inj?)      Docket No.     

8/11/93 8/19/93 9/2/93

Spud Date      Date Reached TD      Completion Date     

INSTRUCTIONS: An original and two copies of this form shall be filed with the Kansas Corporation Commission, 200 Colorado Derby Building, Wichita, Kansas 67202, within 120 days of the spud date, recompletion, workover or conversion of a well. Rule 82-3-130, 82-3-106 and 82-3-107 apply. Information on side two of this form will be held confidential for a period of 12 months if requested in writing and submitted with the form (see rule 82-3-107 for confidentiality in excess of 12 months). One copy of all wireline logs and geologist well report shall be attached with this form. ALL CEMENTING TICKETS MUST BE ATTACHED. Submit CP-4 form with all plugged wells. Submit CP-111 form with all temporarily abandoned wells.

All requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Signature Terry L. Hoffman

Title Senior Drilling Technician Date 11/30/93

Subscribed and sworn to before me this 21<sup>st</sup> day of November 19 93.

Notary Public Dorinda S. Allen

Date Commission Expires June 30, 1995

E.C.C. OFFICE USE ONLY		RECEIVED
F	Letter of Confidentiality Attached	12-9-93 DEC 06 1993 OIL & GAS CONSERVATION DIVISION Wichita, Kansas (Specify)
C	Wireline Log Received	
C	Geologist Report Received	
Distribution		
<u>    </u>	ECC	<u>    </u> SWD/Re
<u>    </u>	ECS	<u>    </u> Plug

Operator Name Axem Resources Incorporated

Lease Name Bobcat

Well # 1-2

Sec. 2 Twp. 18S Rge. 43

East  
 West

County Greeley

**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  Yes  No  
(Attach Additional Sheets.)

Samples Sent to Geological Survey  Yes  No

Cores Taken  Yes  No

Electric Log Run  Yes  No  
(Submit Copy.)

List All E.Logs Run:

Name	Formation (Top), Depth and Datum		Sample
	Top	Datum	
Topeka	3,480	+57	
Lansing	4,148'	-251'	
Marmaton	4,502'	-665'	
Cherokee	4,708'	-811'	
Morrow Shale	5,036'	-1,139'	
Morrow Sand	5,130'	-1,233'	

Induction  
BHC/GR  
FDC/CNL/Pe

**CASING RECORD**

New  Used

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	12½"	8-5/8"	24	309'	60/40 Poz	200 ✓	2% Gel-3% cd
Production	7-7/8"	5½"	15.5	5,279'	Class A	200 ✓	10% Salt .3% FL 50 .2% CD-31

**ADDITIONAL CEMENTING/SQUEEZE RECORD**

Purpose:	Depth Top Bottom	Type of Cement	#Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate				
<input type="checkbox"/> Protect Casing				
<input type="checkbox"/> Plug Back TD				
<input type="checkbox"/> Plug Off Zone				

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type		Acid, Fracture, Shot, Cement Squeeze Record
	Specify Footage of Each Interval Perforated	Depth	
4	5,140-5,146'		

**TUBING RECORD** Size 2-7/8" Set At 5,174' Packer At AC @ 5,123' Liner Run  Yes  No

Date of First, Resumed Production, SWD or Inj. 9/10/93 Producing Method  Flowing  Pumping  Gas Lift  Other (Explain)

Estimated Production Per 24 Hours	Oil Sbls.	Gas Mcf	Water Sbls.	Gas-Oil Ratio	Gravity
	37	951	0	25.7	36.8

Disposition of Gas:  
 Vented  Sold  Used on Lease  
(If vented, submit ACD-18.)

**METHOD OF COMPLETION**

Open Hole  Perf.  Dually Comp.  Commingled 5,140-5,146'  
 Other (Specify) \_\_\_\_\_

Production Interval

ORIGINAL

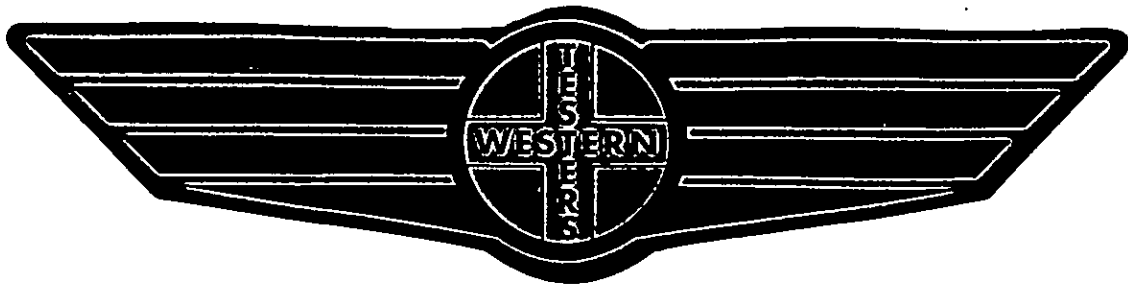
API#15-071-20604

COMPANY MURFIN DRILLING/  
DCX RESOURCES/AXEM RESOURCES

LEASE & WELL NO. #1-2 BOBCAT

SEC. 2 TWP. 18S RGE. 43W TEST NO. 1 DATE 8/18/93

# FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone 1 - 800-688-7021

RECEIVED  
STATE COOPERATION COMMISSION

DEC 06 1993

CONSERVATION DIVISION  
Wichita, Kansas

DST REPORT

GENERAL INFORMATION

DATE : 8/18/93  
CUSTOMER : MURFIN DRLG/DCX/AXEM  
WELL : #1-2 TEST: 1  
ELEVATION: 3904 KB EST  
SECTION : 2  
RANGE : 43W COUNTY: GREELEY  
GAUGE SN#: 13760 RANGE : 3950  
TICKET : 18514  
LEASE : BOBCAT  
GEOLOGIST: BANKS  
FORMATION: MORROW  
TOWNSHIP : 18S  
STATE : KS  
CLOCK : 12

WELL INFORMATION

PERFORATION INTERVAL FROM: 5020.00 ft TO: 5160.00 ft TVD: 5160.0 ft  
DEPTH OF SELECTIVE ZONE: TEST TYPE: GAS  
DEPTH OF RECORDERS: 5028.0 ft 5031.0 ft  
TEMPERATURE: 142.0  
DRILL COLLAR LENGTH: 409.0 ft I.D.: 2.200 in  
WEIGHT PIPE LENGTH : 0.0 ft I.D.: 0.000 in  
DRILL PIPE LENGTH : 4579.0 ft I.D.: 3.800 in  
TEST TOOL LENGTH : 32.0 ft TOOL SIZE : 5.500 in  
ANCHOR LENGTH : 140.0 ft ANCHOR SIZE: 5.500 in  
SURFACE CHOKE SIZE : 0.750 in BOTTOM CHOKE SIZE: 0.750 in  
MAIN HOLE SIZE : 7.875 in TOOL JOINT SIZE : 4.5XH  
PACKER DEPTH: 5015.0 ft SIZE: 6.750 in  
PACKER DEPTH: 5020.0 ft SIZE: 6.750 in  
PACKER DEPTH: 0.0 ft SIZE: 0.000 in  
PACKER DEPTH: 0.0 ft SIZE: 0.000 in

MUD INFORMATION

DRILLING CON. : MURFIN RIG 24  
MUD TYPE : CHEMICAL  
WEIGHT : 9.300 ppg  
CHLORIDES : 4900 ppm  
JARS-MAKE : WTC  
DID WELL FLOW?: NO  
VISCOSITY : 56.00 cp  
WATER LOSS: 8.200 cc  
SERIAL NUMBER: 415  
REVERSED OUT?: NO

COMMENTS

Comment

INITIAL FLOW PERIOD STRONG BLOW -BOTTOM OF BUCKET  
IN 1 MINUTE. GAS TO SURFACE IN 30 MINUTES.  
FINAL FLOW PERIOD GAS TO SURFACE. SEE GAS SHEET

## DST REPORT (CONTINUED)

### COMMENTS (CONTINUED)

Comment

ATTACHED.

### FLUID RECOVERY

Feet of Fluid	% Oil	% Gas	% Water	% Mud	Comments
165.0	50.0	0.0	0.0	50.0	MUD CUT OIL
120.0	90.0	0.0	0.0	10.0	MUD CUT OIL
60.0	90.0	0.0	0.0	10.0	MUD CUT OIL
0.0	0.0	0.0	0.0	0.0	CHLORIDES 5000 PPM

### RATE INFORMATION

OIL VOLUME: 1.1495 STB	TOTAL FLOW TIME: 135.0000 min.
GAS VOLUME: 0.0000 SCF	AVERAGE OIL RATE: 17.3010 STB/D
MUD VOLUME: 0.4725 STB	AVERAGE WATER RATE: 0.0000 STB/D
WATER VOLUME: 0.0000 STB	
TOTAL FLUID : 1.6220 STB	

### FIELD TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2434.00

Description	Duration	p1	p End
INITIAL FLOW	45.00	312.00	390.00
INITIAL SHUT-IN	60.00		439.00
FINAL FLOW	90.00	400.00	400.00
FINAL SHUT-IN	120.00		439.00

FINAL HYDROSTATIC PRESSURE: 2394.00

DST REPORT (CONTINUED)

OFFICE TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2444.00

<u>Description</u>	<u>Duration</u>	<u>p1</u>	<u>p End</u>
INITIAL FLOW	45.00	353.00	404.00
INITIAL SHUT-IN	60.00		436.00
FINAL FLOW	90.00	412.00	412.00
FINAL SHUT-IN	120.00		435.00

FINAL HYDROSTATIC PRESSURE: 2414.00

ORIGINAL

GAS FLOW REPORT

GENERAL INFORMATION

DATE : 8/18/93	TICKET : 18514
CUSTOMER : MURFIN DRLG/DCX/AXEM	LEASE : BOBCAT
WELL : #1-2 TEST: 1	GEOLOGIST: BANKS
ELEVATION: 3904 KB EST	FORMATION: MORROW
SECTION : 2	TOWNSHIP : 18S
RANGE : 43W COUNTY: GREELEY	STATE : KS
GAUGE SN#: 13760 RANGE : 3950	CLOCK : 12

PRE FLOW

Time Guage (min)	Tester Type	Orifice Size	Pressure	Flow Desc.
30 MIN	MERLA	0.750	30 PSIG	522000 SCF/D
40 MIN	MERLA	0.750	34 PSIG	569000 SCF/D
45 MIN	MERLA	0.750	38 PSIG	617000 SCF/D

SECOND FLOW

Time Guage (min)	Tester Type	Orifice Size	Pressure	Flow Desc.
10 MIN	MERLA	0.750	42 PSIG	662000 SCF/D
20 MIN	MERLA	0.750	44 PSIG	685000 SCF/D
30 MIN	MERLA	0.750	46 PSIG	708000 SCF/D
40 MIN	MERLA	0.750	48 PSIG	732000 SCF/D
50 MIN	MERLA	0.750	48 PSIG	732000 SCF/D
60 MIN	MERLA	0.750	49 PSIG	744000 SCF/D
70 MIN	MERLA	0.750	50 PSIG	756000 SCF/D
80 MIN	MERLA	0.750	52 PSIG	779000 SCF/D
90 MIN	MERLA	0.750	50 PSIG	756000 SCF/D

PRESSURE TRANSIENT REPORT

GENERAL INFORMATION

DATE : 8/18/93	TICKET : 18514
CUSTOMER : MURFIN DRLG/DCX/AXEM	LEASE : BOBCAT
WELL : #1-2                      TEST: 1	GEOLOGIST: BANKS
ELEVATION: 3904 KB EST	FORMATION: MORROW
SECTION : 2	TOWNSHIP : 18S
RANGE : 43W                      COUNTY: GREELEY	STATE : KS
GAUGE SN#: 13760                RANGE : 3950	CLOCK : 12

INITIAL FLOW

Time (min)	Pressure	Delta P
0.00	353.00	353.00
5.00	368.00	15.00
10.00	389.00	21.00
15.00	393.00	4.00
20.00	395.00	2.00
25.00	397.00	2.00
30.00	399.00	2.00
35.00	401.00	2.00
40.00	402.00	1.00
45.00	404.00	2.00

INITIAL SHUT IN

Time (min)	Pressure	Delta P	Horner T
3.00	420.00	420.00	0.00
6.00	421.00	1.00	0.00
9.00	422.00	1.00	0.00
12.00	423.00	1.00	0.00
15.00	424.00	1.00	0.00
18.00	425.00	1.00	0.00
21.00	426.00	1.00	0.00
24.00	427.00	1.00	0.00
27.00	428.00	1.00	0.00
30.00	429.00	1.00	0.00
33.00	430.00	1.00	0.00
36.00	431.00	1.00	0.00
39.00	432.00	1.00	0.00
42.00	433.00	1.00	0.00
45.00	434.00	1.00	0.00
48.00	434.00	0.00	0.00



## PRESSURE TRANSIENT REPORT (CONTINUED)

## INITIAL SHUT IN (CONTINUED)

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
51.00	435.00	1.00	0.00
54.00	435.00	0.00	0.00
57.00	436.00	1.00	0.00
60.00	436.00	0.00	0.00

## FINAL FLOW

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
0.00	412.00	412.00
5.00	412.00	0.00
10.00	412.00	0.00
15.00	412.00	0.00
20.00	412.00	-0.00
25.00	412.00	0.00
30.00	412.00	0.00
35.00	412.00	0.00
40.00	412.00	0.00
45.00	412.00	0.00
50.00	412.00	0.00
55.00	412.00	0.00
60.00	412.00	0.00
65.00	412.00	0.00
70.00	412.00	0.00
75.00	412.00	0.00
80.00	412.00	0.00
85.00	412.00	0.00
90.00	412.00	0.00

## FINAL SHUT IN

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
3.00	422.00	422.00	0.00
6.00	422.00	0.00	0.00
9.00	423.00	1.00	0.00
12.00	423.00	0.00	0.00
15.00	424.00	1.00	0.00
18.00	424.00	0.00	0.00
21.00	425.00	1.00	0.00

PRESSURE TRANSIENT REPORT (CONTINUED)

FINAL SHUT IN (CONTINUED)

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
24.00	425.00	0.00	0.00
27.00	426.00	1.00	0.00
30.00	427.00	1.00	0.00
33.00	429.00	2.00	0.00
36.00	431.00	2.00	0.00
39.00	432.00	1.00	0.00
42.00	433.00	1.00	0.00
45.00	434.00	1.00	0.00
48.00	435.00	1.00	0.00
51.00	435.00	0.00	0.00
54.00	435.00	0.00	0.00
57.00	435.00	0.00	0.00
60.00	435.00	0.00	0.00
63.00	435.00	0.00	0.00
66.00	435.00	0.00	0.00
69.00	435.00	0.00	0.00
72.00	435.00	0.00	0.00
75.00	435.00	0.00	0.00
78.00	435.00	0.00	0.00
81.00	435.00	0.00	0.00
84.00	435.00	0.00	0.00
87.00	435.00	0.00	0.00
90.00	435.00	0.00	0.00
93.00	435.00	0.00	0.00
96.00	435.00	0.00	0.00
99.00	435.00	0.00	0.00
102.00	435.00	0.00	0.00
105.00	435.00	0.00	0.00
108.00	435.00	0.00	0.00
111.00	435.00	0.00	0.00
114.00	435.00	0.00	0.00
117.00	435.00	0.00	0.00
120.00	435.00	0.00	0.00

## FLUID SAMPLE REPORT

## GENERAL INFORMATION

DATE	: 8/18/93	TICKET	: 18514
CUSTOMER	: MURFIN DRLG/DCX/AXEM	LEASE	: BOBCAT
WELL	: #1-2	TEST: 1	GEOLOGIST: BANKS
ELEVATION	: 3904 KB EST	FORMATION	: MORROW
SECTION	: 2	TOWNSHIP	: 18S
RANGE	: 43W	COUNTY: GREELEY	STATE : KS
GAUGE SN#	: 13760	RANGE : 3950	CLOCK : 12

## SAMPLE INFORMATION

PRESSURE IN SAMPLER:	400.00 PSIG	BHT:	142.0 DEG F
TOTAL VOLUME OF SAMPLER:	3150.00 cc		
TOTAL VOLUME OF SAMPLE:	500.00 cc		
OIL:	100.00 cc		
WATER:	0.00 cc		
MUD:	400.00 cc		
GAS:	4.00 cc		
OTHER:	0.00 cc		

## RESISTIVITY

DRILLING MUD:	.65 @ 80 DEGREES F	CHLORIDE CONTENT:	5000.00 ppm
MUD PIT SAMPLE:	.65 @ 80 DEGREES F	CHLORIDE CONTENT:	5000.00 ppm
GAS/OIL RATIO:		GRAVITY:	
WHERE WAS SAMPLE DRAINED:			
REMARKS:			