

CONFIDENTIAL

ORIGINAL

FORM MUST BE TYPED

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

Operator: License# 31632

Name: BISON PRODUCTION COMPANY

Address 9320 EAST CENTRAL

City/State/Zip WICHITA, KS 67206

Purchaser: KOCH OIL COMPANY

Operator Contact Person: C. J. LETT, III  
Phone (316) 636-1801

Contractor: Name: DUKE DRILLING CO., INC.

License: 5929

Wellsite Geologist: DEAN PATTISSON

Designate Type of Completion  
 New Well  Re-Entry  Workover

Oil  SWD  SLOW  Temp Abd.  
 Gas  ENHR  SIGW  
 Dry  Other (Core, WSW, Expl., Cathodic, etc.)

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

Operator: \_\_\_\_\_

Well Name: \_\_\_\_\_

Comp. Date \_\_\_\_\_ Old Total Depth \_\_\_\_\_

Deepening \_\_\_\_\_ Re-perf. \_\_\_\_\_ Conv. to Inj/SWS  
Plug Back \_\_\_\_\_ PBDT  
Commingled \_\_\_\_\_ Docket No. \_\_\_\_\_  
Dual Completion \_\_\_\_\_ Docket No. \_\_\_\_\_  
Other (SWD or Inj?) \_\_\_\_\_ Docket No. \_\_\_\_\_

03-05-97 03-11-97 03-12-97  
Spud Date Date Reached TD Completion Date

SIDE ONE

API NO. 15 077 007-21321-0000

County \_\_\_\_\_ Harper \_\_\_\_\_

SE SW SE Sec. 9 Twp. 31S Rge. 8 E XW

330' Feet from S/N (circle one) Line of Section

1650 Feet from E/W (circle one) Line of Section

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

Lease Name CULVER Well # 5-9

Field Name SPIVEY-GRABS

Producing Formation MISSISSIPPI CHERT

Elevation: Ground 1615 KB 1632

Total Depth 4482' PBDT 4450'

Amount of Surface Pipe Set and Cemented 228 Feet

Multiple Stage Cementing Collar Used? Yes  No

If yes, show depth set \_\_\_\_\_ Feet

If Alternate II completion, cement circulated from \_\_\_\_\_

feet depth to \_\_\_\_\_ w/ \_\_\_\_\_ sx cmt.

6-26-97

Drilling Fluid Management Plan  
(Data must be collected from the Reserve Pit)

Chloride content 59,000 ppm Fluid volume 800 bbls.

Dewatering method used HAULING

Location of fluid disposal if hauled offsite: JUN 24

Operator Name JODY **CONFIDENTIAL**

Lease Name SANDERS License No. 3288

SW Quarter Sec. 20 Twp. 31 S Rng. 8 E/W

County HARPER Docket No. D23313

INSTRUCTIONS: An original and two copies of this form shall be filed with the Kansas Corporation Commission, 130 S. Market, Rm 2078, 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 \_\_\_\_\_

Title C. J. LETT, III, PRESIDENT Date: 6-24-97 **RELEASED**

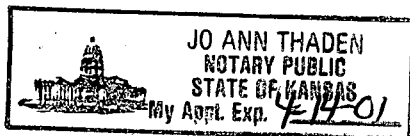
Subscribed and sworn to before me this 24TH day of JUNE **SEP 16 1998**  
1997.

Notary Public Jo Ann Thaden

Date Commission Expires 04-14-01 **FROM CONFIDENTIAL**

K.C.C. OFFICE USE ONLY			
F	<input checked="" type="checkbox"/>	Letter of Confidentiality Attached	
C	<input checked="" type="checkbox"/>	Wireline Log Received	
C	<input type="checkbox"/>	Geologist Report Received	
Distribution			
<input checked="" type="checkbox"/>	KCC	<input type="checkbox"/> SWD/Rep	<input type="checkbox"/> NGPA
<input type="checkbox"/>	KGS	<input type="checkbox"/> Plug	<input type="checkbox"/> Other
(Specify)			

Form ACO-1 (7-91)



SIDE TWO

Operator Name BISON PRODUCTION COMPANY Lease Name CULVER Well # 5-9

Sec. 9 Twp. 31S Rge. 8W  East  West County HARPER

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  Log Formation (Top). Depth and Datum  Sample  
 (Attach Additional Sheets.)  
 Name Top Datum  
 Samples Sent to Geological Survey  Yes  No Mississippi Chert 4396 -2773  
 Cores Taken  Yes  No  
 Electric Log Run  Yes  No  
 List All E. Logs Run:  
 DIL, CDL, CNL, **BOREHOLE COMPENSATED SONIC**

CASING RECORD							
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"	20#	228'	60/40 POZ	175	3%cc 2% gel
PRODUCTION	7-7/8"	5-1/2"	14#	4480'	ACS	100	5#/sk kolseal

ADDITIONAL CEMENTING/SQUEEZE RECORD					
Purpose:	Depth		Type of Cement	#Sacks Used	Type and Percent Additives
	Top	Bottom			
<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		(Amount and Kind of Material Used)	Depth
4	4402-4426'		Acid: 2,750 gal, Frac: 51,300 gal x-link gel + 58,500# SD	4426
<b>TUBING RECORD</b>				
Size	Set At	Packer At	Liner Run	
2-7/8		NONE	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Date of First, Resumed Production, SWD or Inj.:		Producing Method		
		<input type="checkbox"/> Flowing <input checked="" type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other (Explain)		
Estimated Production Per 24 Hours	Oil Bbls	Gas Mcf	Water Bbls	Gas-Oil Ratio Gravity
	12	80	150	6,600:1 32

Disposition of Gas:  Vented  Sold  Used on Lease **METHOD OF COMPLETION**  Open Hole  Perf.  Dually Comp.  Comingled **Production Interval**  
 (If vented, submit ACO-18.)  Other (Specify) 4402' - 4426'

15-077-21321-0000  
**ALLIED CEMENTING CO., INC.**

6633

REMIT TO P.O. BOX 31  
 RUSSELL, KANSAS 67665

*file when 5-9*

SERVICE POINT:

*Med. Lodge, ks.*

**ORIGINAL**

DATE	SEC.	TWP.	RANGE	CALLED OUT	ON LOCATION	JOB START	JOB FINISH
3-12-97	9	36S	8W	6:00A.M.	9:00A.M.	12:00P.M.	2:30P.M.
LEASE/Culver		WELL # 5-9	LOCATION Mag Plant, 2E-1S-1/4W		COUNTY Harper	STATE KS.	

OLD OR NEW (Circle one)

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CONTRACTOR	<i>Duke Drlg. #2</i>	OWNER	<i>Bison Energy Corp.</i>
TYPE OF JOB	<i>Prod. Csg.</i>	CEMENT	
HOLE SIZE	<i>7 7/8</i>	T.D.	<i>4482'</i>
CASING SIZE	<i>5 1/2 x 14 #</i>	DEPTH	<i>4471'</i>
TUBING SIZE		DEPTH	
DRILL PIPE	<i>4 1/2 x hole</i>	DEPTH	<i>4482</i>
TOOL		DEPTH	
PRES. MAX	<i>1200</i>	MINIMUM	<i>200</i>
MEAS. LINE		SHOE JOINT	<i>20.63</i>
CEMENT LEFT IN CSG.			
PERFS.			

AMOUNT ORDERED	<i>300 Gals. mud-sweep</i>		
	<i>255xs. 60/40/4% Gel</i>		
	<i>1255xs. Class A Asct's #kol Seal</i>		
	<i>Used 1005xs. ASC</i>		<i>1/4" Flo-Seal</i>
COMMON	<i>15</i>	@	<i>6.10</i>
POZMIX	<i>10</i>	@	<i>3.15</i>
GEL	<i>1</i>	@	<i>9.50</i>
CHLORIDE		@	
	<i>ASC 100</i>	@	<i>7.85</i>
	<i>KOL-SEAL 500 #</i>	@	<i>3.8</i>
	<i>MUD SWEEP 300 Gals.</i>	@	<i>1.90</i>
		@	
		@	
HANDLING	<i>150</i>	@	<i>1.05</i>
MILEAGE	<i>150 x .30</i>	@	<i>.04</i>
<b>TOTAL \$745.00</b>			

EQUIPMENT SEP 16 1998

PUMP TRUCK	CEMENTER <i>FROM CONFIDENTIAL</i>
# <i>233-301</i>	HELPER <i>Justin Hart</i>
BULK TRUCK	
# <i>2242</i>	DRIVER <i>James Holt</i>
BULK TRUCK	
#	DRIVER

RELEASED

**REMARKS:**

*Pipe on Bottom Circ. w/Dig Pump.  
 mix Pump 2 Bbls mud-sweep. Release Bottom  
 Plug. Pump 5 Bbls mud-sweep. 105xs. mouse-  
 hole + 155xs. Rathole w/60/40/4% Gel  
 Cement 1005xs. ASC + 5 #kol Seal + 1/4 #  
 Flo-Seal Release Top Plug. Displace  
 Plug w/109 Bbls Fresh H<sub>2</sub>O. Bump Plug  
 Release PST. Float Held.*

DEPTH OF JOB		<i>4471'</i>
PUMP TRUCK CHARGE		<i>1090.00</i>
EXTRA FOOTAGE	@	
MILEAGE	<i>30</i>	@ <i>2.85</i>
PLUG Rubber Top	<i>5 1/2</i>	@ <i>50.00</i>
Rubber Bottom	<i>5 1/2</i>	@ <i>59.00</i>
	@	

TOTAL \$1284.00

CHARGE TO: *Bison Energy*  
 STREET *9320 EAST CENTRAL*  
 CITY *WICHITA* STATE *KANSAS* ZIP *67206*

**FLOAT EQUIPMENT**

<i>5 1/2</i>		
1-Reg Guide Shoe	@	<i>168.00</i>
1-AFU Insert	@	<i>263.00</i>
1-Basket	@	<i>142.00</i>
7-Centerizers	@	<i>56.00</i>
1-Rotate Head	@	<i>75.00</i>

TOTAL \$1040.00

TAX	
TOTAL CHARGE	<i>\$1284.00</i>
DISCOUNT	<i>\$244.00</i>
<b>NET \$1040.00</b>	

To Allied Cementing Co., Inc.  
 You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read & understand the "TERMS AND CONDITIONS" listed on the reverse side.

SIGNATURE *x R. Meyers* - Russell Meyers

**CONFIDENTIAL SERVICE**

2015.00

to show  
app. info  
of refer. items

15-077-21321-0000

**CEMENTING LOG**

STAGE NO.

**APPLIED CEMENTING CO., INC.**

Date 3-12-97 District Med. ledge Ticket No. 6633  
 Company Bison Energy Rig Duke #2  
 Lease Culver Well No. 5-9  
 County Harper State KS  
 Location MAQ Plant, 2E-1S Field 9-31S-8W  
4W

CASING DATA: PTA  Squeeze   
 Surface  Intermediate  Production  Liner   
 Size 5 1/2 Type 555 Weight 14 Collar \_\_\_\_\_

Burst 4,270 PSI Collapsed 4,040 PSI  
 Casing Depths: Top \_\_\_\_\_ Bottom \_\_\_\_\_

**CONFIDENTIAL**

Drill Pipe: Size 4 1/2 Weight 16.60 Collars x-hole  
 Open Hole: Size 7 7/8 T.D. 4482 ft. P.B. to \_\_\_\_\_ ft.

CAPACITY FACTORS:  
 Casing: Bbls/Lin. ft. .0244 Lin. ft./Bbl. 40.98  
 Open Holes: Bbls/Lin. ft. .0602 Lin. ft./Bbl. 16.5993  
 Drill Pipe: Bbls/Lin. ft. .0142 Lin. ft./Bbl. 70.32  
 Annulus: Bbls/Lin. ft. .0309 Lin. ft./Bbl. 32.4065  
 Bbls/Lin. ft. \_\_\_\_\_ Lin. ft./Bbl. \_\_\_\_\_  
 Perforations: From \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Amt. \_\_\_\_\_

CEMENT DATA:

Spacer Type: 300 Gallons - mud - Sweep  
 Amt. \_\_\_\_\_ Skys Yield \_\_\_\_\_ ft<sup>3</sup>/sk Density \_\_\_\_\_ PPG

**ORIGINAL CLASS A**

LEAD: Pump Time \_\_\_\_\_ hrs. Type CLASS A  
60/40/4%G-1 Excess \_\_\_\_\_  
 Amt. 25 Skys Yield 1.40 ft<sup>3</sup>/sk Density 14.1 PPG

TAIL: Pump Time \_\_\_\_\_ hrs. Type CLASS A + ASC +  
5# Kol-Seal + 1/4# Flo-Seal Excess \_\_\_\_\_  
 Amt. 100 Skys Yield 1.57 ft<sup>3</sup>/sk Density 14.5 PPG

WATER: Lead 6.7 gals/sk Tail 7.23 gals/sk Total 22 Bbls.

Pump Trucks Used 233-302 Justin H.  
 Bulk Equip. 242 James H.

Float Equip: Manufacturer 5/2  
 Shoe: Type Reg Guide Shoe # \_\_\_\_\_ Depth 4471'  
 Float: Type AFU Insert # \_\_\_\_\_ Depth 4450.37'  
 Centralizers: Quantity 7 Plugs Top Rubber Btm. Rubber  
 Stage-Collars Rotate Head  
 Special Equip. Basket  
 Disp. Fluid Type Fresh H<sub>2</sub>O Amt. 109 Bbls. Weight 8.34 PPG  
 Mud Type Chemical / LCM Weight 9.2 PPG

COMPANY REPRESENTATIVE Russell Meyers / Steve Anderson CEMENTER Larry Dreiling

TIME	PRESSURES PSI		FLUID PUMPED DATA			REMARKS
	AM/PM	DRILL-PIPE CASING	ANNULUS	TOTAL FLUID	Pumped Per Time Period	
12:30						Pipe on Bottom Circ. w/ Rig Pump
1:05		200		2		mix + Pump 2 Bbls mud - Sweep
1:08		200		5		Release Bottom Plug
1:15		50		2		Pump 5 Bbls mud - Sweep
		50		3		Stop Pumps.
				3		Cement 10sxs 60/40/4 mouse hole
				3		Cement 15sxs 60/40/4 Rathole
				3		Cement 110sxs CLASS A + ASC +
1:25		300		28		5# Kol-Seal + 1/4# Flo-Seal
		50		8		Cement In. Stop Pumps.
				4		Wash out Pump Lines
1:40		200		30		Release Top Plug
		200		69		Start Displace w/ Fresh H <sub>2</sub> O
		200		69		mud-sweep turn shoe
		250		81		Bottom Plug on Insert
		350		86		Cement Turn Shoe
		500		90		lift PSI INCREASE
		600		105		Decrease Rate - Steady PSI
2:00		1200		109		Slow Rate
						RELEASED
						SEP 16 1998
						FROM CONFIDENTIAL

FINAL DISP. PRESS: 600 PSI BUMP PLUG TO 1200 PSI BLEEDBACK 1/4 BBLs.

THANK YOU

TELEPHONE  
AREA CODE 913 483-2627  
AREA CODE 913 483-3887

15-077-21321-0003  
**ALLIED CEMENTING COMPANY, INC.**

P. O. BOX 31  
RUSSELL, KANSAS 67665

Federal Tax I.D.# 48-0727860

**ORIGINAL**

TO: Duke Drilling  
P. O. Box 823  
Great BEnd, KS 67530

INVOICE NO. 74604

PURCHASE ORDER NO. \_\_\_\_\_

LEASE NAME Culver 5-9

DATE 3-5-97

MAR 15 1997

SERVICE AND MATERIALS AS FOLLOWS:

**CONFIDENTIAL**

Common 105 sks @\$6.10	\$640.50	
Pozmix 70 sks @\$3.15	220.50	
GEL 3 sks @\$9.50	28.50	
Chloride 6 sks @\$28.00	<u>168.00</u>	\$1,057.50

Handling 175 sks @\$1.05	183.75	
Mileage (30) @\$.04¢ per sk per mi	210.00	
Surface	445.00	
Mi @\$2.85 pmp trk chg	85.50	
1 plug	<u>45.00</u>	969.25

Total

\$2,026.75

(304.01)

1722 74

If Account CURRENT a  
Discount of \$ 304.01  
will be Allowed ONLY if  
Paid Within 30 Days from  
Date of Invoice.



*Thank You!*

All Prices Are Net, Payable 30 Days Following Date of Invoice. 1½% Charged Thereafter.

RUC

JUN 24

CONFIDENTIAL

RELEASED

SEP 16 1998

FROM CONFIDENTIAL

6-26-97  
1722 74

15-077-21321-0000

CONFIDENTIAL

Superior Testers Enterprises, Inc.

R.R. 3, Box 295B, Great Bend, Kansas 67530

(316) 792-6902

ORIGINAL

Date 3-11-1997 Location <sup>16218B</sup> ~~MPH~~ 30' / 32 9-31-8" Elevation 16130' County HARPER

Company Bison Production Company Number of Copies 5

Charts Mailed to 9320 East Central Wichita Kansas 67206

Drilling Contractor Duke Drilling Rig #2

Length Drill Pipe 4379 I.D. Drill Pipe 3.80 Tool Joint Size 4 1/2" x 11'

Length Weight Pipe none I.D. Weight Pipe none Tool Joint Size none

Length Drill Collars none I.D. Drill Collars none Tool Joint Size none

Top Packer Depth 4402 Bottom Packer Depth 4407 Number of Packers 2 Packer Size 6 3/4"

TESTED FROM 4407 TO 4420 ANCHOR LENGTH 13 TOTAL DEPTH 4420 Hole Size 7 7/8"

LEASE & WELL NO. Culver # 5-9 FORMATION TESTED Mississippi TEST NO. 2

Mud Weight 9.1 Viscosity 46 Water Loss 9.4 Chlorides - Pits 4000 D.S.T. 12000

Maximum Temp. 115 °F Initial Hydrostatic Pressure (A) 2129 P.S.I. Final Hydrostatic Pressure (H) 2094 P.S.I.

Tool Open I.F.P. from 10:10 Am to 10:25 Am 15 min

from [B] 119 P.S.I. to [C] 53 P.S.I.

Tool Closed I.C.I.P. from 10:25 Am to 10:55 Am 30 min

[D] 895 P.S.I.

Tool Open F.F.P. from 10:55 Am to 11:55 Am 60 min

from [E] 54 P.S.I. to [F] 107 P.S.I.

Tool Closed F.C.I.P. from 11:55 Am to 10:55 Am 90 min

[G] 818 P.S.I.

Initial Blow WEAK building blow built to 8 inches into the water

Final Blow WEAK building to strong surging blow indicating severe plugging

Total Feet Recovered 165 Gravity of Oil \_\_\_\_\_ Corrected

45 Feet of Gassy mud with a trace of oil 0% Gas 1% Oil 80% Mud 20% Water

120 Feet of Gassy mud with a trace of oil 10% Gas 2% Oil 50% Mud 38% Water

\_\_\_\_ Feet of \_\_\_\_\_ % Gas \_\_\_\_\_ % Oil \_\_\_\_\_ % Mud \_\_\_\_\_ % Water

\_\_\_\_ Feet of \_\_\_\_\_ % Gas \_\_\_\_\_ % Oil \_\_\_\_\_ % Mud \_\_\_\_\_ % Water

\_\_\_\_ Feet of \_\_\_\_\_ % Gas \_\_\_\_\_ % Oil \_\_\_\_\_ % Mud \_\_\_\_\_ % Water

\_\_\_\_ Feet of \_\_\_\_\_ % Gas \_\_\_\_\_ % Oil \_\_\_\_\_ % Mud \_\_\_\_\_ % Water

\_\_\_\_ Feet of none \_\_\_\_\_ % Gas \_\_\_\_\_ % Oil \_\_\_\_\_ % Mud \_\_\_\_\_ % Water

\_\_\_\_ Feet of JUN 2 4 \_\_\_\_\_ % Gas \_\_\_\_\_ % Oil \_\_\_\_\_ % Mud \_\_\_\_\_ % Water

\_\_\_\_ Feet of \_\_\_\_\_ % Gas \_\_\_\_\_ % Oil \_\_\_\_\_ % Mud \_\_\_\_\_ % Water

\_\_\_\_ Feet of \_\_\_\_\_ % Gas \_\_\_\_\_ % Oil \_\_\_\_\_ % Mud \_\_\_\_\_ % Water

Remarks 23 min.

Extra Equipment - Jars YES Safety Joint YES Extra Packer none Straddle none Hook Wall none

Top Recorder No. 78225 Clock No. Electronic Depth 4413 Cir. Sub none Sampler none

Bottom Recorder No. 91058 Clock No. 47441 Depth 4417 Insurance none

Price of Job \_\_\_\_\_

Tool Operator Gene Rudy

Approved By \_\_\_\_\_  
No 11628

Superior Testers Enterprises, Inc. shall not be liable for damage of any kind to the property or personnel of the one for whom a test is made, of for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test. Tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.

15-077-21321-0000

**SUPERIOR TESTERS ENTERPRISES INC.**

Great Bend, Kansas

**CHART DATA**

(316) 792-6902

**COVER #5-9 MISSISSIPPI**

State ..... KANSAS

Test Date ..... March 11, 1997

County .....

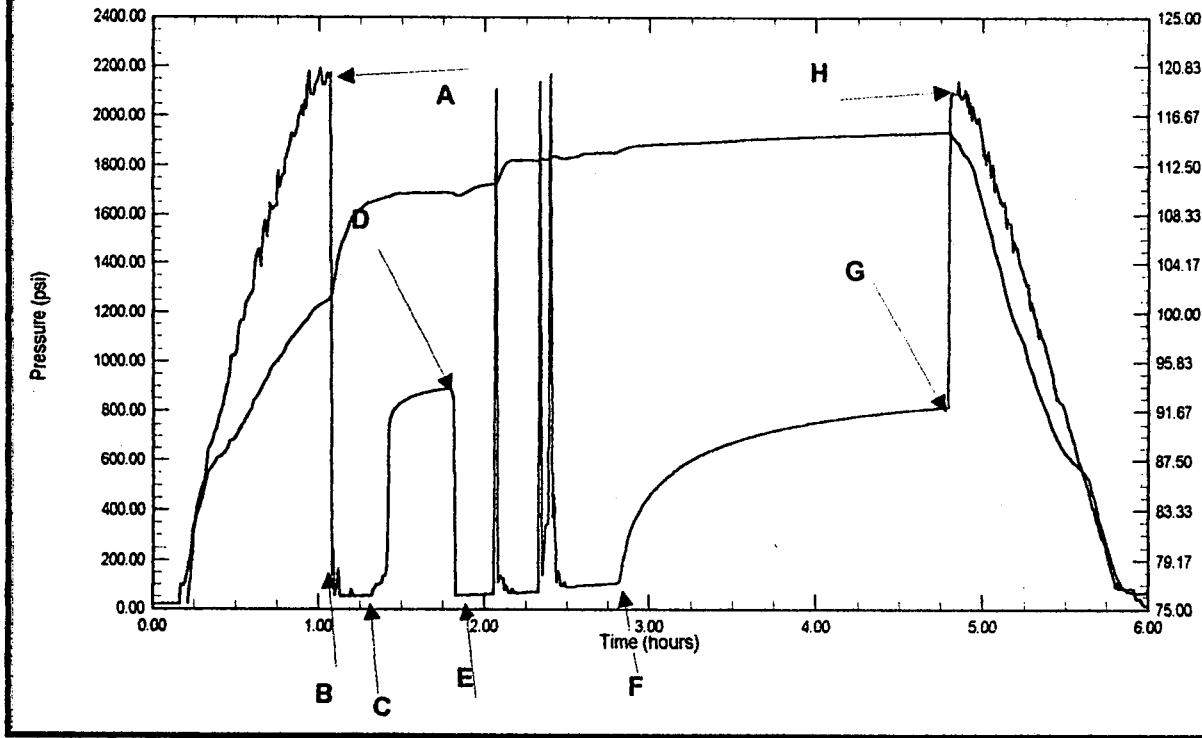
Sec Town Range ..... 1700'FEL-330'FSL 9-31

Field .....

Report Number ..... 11628

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**ORIGINAL**



**Field Reading**

**Office Reading**

(A) Initial Hydrostatic Pressure	2129	psi
(B) Initial Flow Pressure	119	psi
(C) Final Initial Flow Pressure	53	psi
(D) Initial Shut-In Pressure	895	psi
(E) Initial Final Flow Pressure	54	psi
(F) Final Flow Pressure	107	psi
(G) Final Shut-In Pressure	818	psi
(H) Final Hydrostatic Pressure	2094	psi

NOV  
JUN 24  
CONFIDENTIAL

Mechanical Recorder Depth 4417 ft, Recorder Number 11088

**RELEASED**

**SEP 16 1998**

FROM CONFIDENTIAL

Company: BISON PRODUCTION COMPANY Lease & Well No. CULVER #5-9 Test #: 2 Date: 3-11-1997 Sec. 9 TWP. 31S RGE. 8W

15-077-21321-0000

**SUPERIOR TESTERS ENTERPRISES INC.  
DRILL STEM TEST REPORT**

GREAT BEND, KANSAS (316)792-6902

**General Information**

Test Company Name ..... SUPERIOR TESTERS ENTERPRISES INC.  
 Company Name ..... BISON PRODUCTION COMPANY  
 Lease and Well Number ..... CUVER #5-9  
 Formation Tested ..... MISSISSIPPI  
 Test Number ..... 2  
 State ..... KANSAS  
 County ..... HARPER  
 Field .....

Test Date ..... 11-Mar-97  
 Section Town Range ..... 1700'FEL-330'FSL 9-31S-8  
 Report Number ..... 11628  
 Elevation Ground Level ..... 1613  
 Elevation Kelly Bushings ..... 1621  
 Company Representative ..... DEAN PATTISON  
 Testing Engineer ..... GENE BUDIG

**Extra Equipment**

Jars ..... YES  
 Safety Joint ..... YES  
 Extra Packs ..... No  
 Straddle ..... No  
 Hook Wall ..... No  
 Sampler ..... No  
 Circulating Sub ..... No  
 Electronic Recorder ..... YES

**Well Information**

Drilling Contractor ..... DUKE DRILLING RIG #2

Drill Pipe Length ..... 4379  
 Drill Pipe I.D. .... 3.8  
 Tool Joint Size ..... 4 1/2 XH

Weight Pipe Length .....  
 Weight Pipe I.D. .... 2.76  
 Tool Joint Size ..... 4 1/2 X.H.

Drill Collar Length .....  
 Drill Collar I.D. .... 2.25  
 Tool Joint Size ..... 4 1/2 X.H.

Mud Weight #/gal ..... 9.10  
 Viscosity ..... 46.00  
 Water Loss ..... 9.6  
 Chlorides - Pits ..... 4,000  
 Chlorides - DST .....



**SUPERIOR TESTERS ENTERPRISES INC.**  
**DRILL STEM TEST REPORT**

GREAT BEND, KANSAS (316)792-6902

**Tool Setting Information**

Top Packer Depth ..... 4402  
 Bottom packer Depth ..... 4407  
 Number of Packers ..... 2  
 Packer Size ..... 6 3/4

Test Interval (from ) ..... 4407  
 Test Interval (to) ..... 4420.00  
 Anchor Length ..... 13  
 Total Depth (ft) ..... 4420  
 Hole Size (in) ..... 7 7/8

**Pressure Readings**

	<i>Field Reading</i>	<i>Office Reading</i>
Maximum Temp .....	115	
Initial Hydrostatic Pressure .....	2129	
Initial Flow Pressure .....	119	
Final Initial Flow Pressure .....	53	
Initial Shut-In Pressure .....	895	
Initial Final Flow Pressure .....	54	
Final Flow Pressure .....	107	
Final Shut-In Pressure .....	818	
Final Hydrostatic Pressure .....	2094	
Mechanical Recorder Depth (ft) .....	4417	
Recorder Number .....	11088	
Electronic Recorder Depth .....	4413	
Recorder Number .....	11088	

**Comments**

COMPARING THE LOWER CHART WITH THE UPPER CHART IT IS INDICATED THAT THE INITIAL FLOW, INITIAL SHUT-IN AND ALL BUT THE LAST 23 MINUTES OF THE FINAL FLOW ARE INVALID DUE TO SEVERE PLUGGING

**SUPERIOR TESTERS ENTERPRISES INC.  
DRILL STEM TEST REPORT**

GREAT BEND, KANSAS (316) 792-6902

**Flow Times**

*Initial Open*

Tool Open (from) ..... 10:10  
 Tool Open (to) ..... 10:25  
 Duration (min) ..... 15

*Initial Shut-in*

Tool Closed (from) ..... 10:25  
 Tool Closed (to) ..... 10:55  
 Duration (min) ..... 30

*Final Open*

Tool Open (from) ..... 10:55  
 Tool Open (to) ..... 11:55  
 Duration (min) ..... 60

*Final Shut-in*

Tool Closed (from) ..... 11:55  
 Tool Closed (to) ..... 1:55  
 Duration (min) ..... 120

**Recovery Description**

Initial Blow ..... WEAK BUILDING BLOW BUILT TO 8 INCHES INTO THE WATER

Final Blow ..... WEAK BLOW BUILT TO 2 INCHES IN 12 MINUTES  
 FLUSHED TOOL STRONG BLOW DIED IN 10 MINUTES  
 FLUHEH TOOL NO HELP FLUSHED TOOL AGAIN  
 BOTTOM OF THE BUCKET IN 1 MINUTE AND STAYED  
 STEADY

Description	Feet of Recovery	% Gas	% Oil	% Mud	% Water
1) GASSY MUD WITH A TRACE OF OIL	45		1	80	20
2) GASSY MUD WITH A TRACE OF OIL	120	10	2	50	38
3) CHLORIDES 12000					
4)					
5)					
6)					
7)					
8)					
9)					
10)					
11)					
12)					
13)					
14)					
15)					
<b>Total</b>	165				