

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

Operator: License # 8362/4000
Name HBP/SETCO
Address 1625 Broadway, Suite 410
City/State/Zip Denver, CO 80202

Purchaser.....

Operator Contact Person
Phone

Contractor: License # 5107
Name H-30, Inc.

Wellsite Geologist.....
Phone.....

Designate Type of Completion

☒ New Well ☐ Re-Entry ☐ Workover

☒ Gas ☐ SWD ☐ Temp Abd
☒ Dry ☐ Inj ☐ Delayed Comp.
☒ Other (Core, Water Supply etc.)

If ~~OWO~~: old well info as follows:

Operator
Well Name
Comp. Date Old Total Depth.....

WELL HISTORY

Drilling Method:

☒ Mud Rotary ☐ Air Rotary ☐ Cable

9-24-85 10-2-85 10-4-85
.....
Spud Date Date Reached TD Completion Date
4050' 3982
.....
Total Depth PBTD

Amount of Surface Pipe Set and Cemented at 257 feet
Multiple Stage Cementing Collar Used? Yes ☒ No
If yes, show depth set.....feet
If alternate 2 completion, cement circulated
from 257' feet depth to surface 165' SX cmt
Cement Company Name B-J Titan
Invoice # 282044

API No. 15-..... 195-21,703 -00-00

County..... Trego

Approx. SE... NE... SE... Sec 23... Twp 13S... Rge. 21... East
XX West

1400 Ft North from Southeast Corner of Section
330 Ft West from Southeast Corner of Section
(Note: Locate well in section plat below)

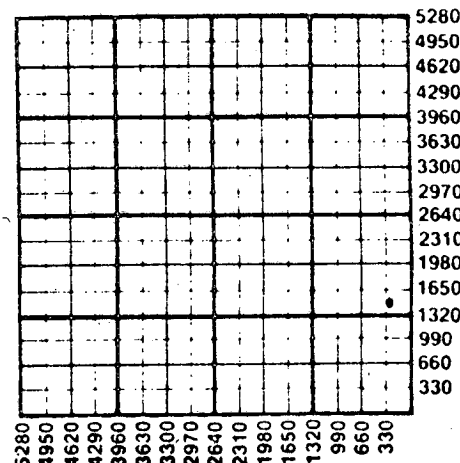
Lease Name..... Kroeger "D" Well #..... 23-9

Field Name.....

Producing Formation..... D+A

Elevation: Ground..... 22.30 KB..... 22.35

Section Plat



WATER SUPPLY INFORMATION

Disposition of Produced Water: ☐ Disposal
Docket # ☐ Repressuring

Questions on this portion of the ACO-1 call:

Water Resources Board (913) 296-3717

Source of Water: Keller (Big Creek)

Division of Water Resources Permit #. T. 85-826.....

Groundwater..... Ft North from Southeast Corner
(Well) Ft West from Southeast Corner of
Sec Twp Rge East West

XX Surface Water 1500 Ft North from Southeast Corner
(Stream, pond etc) 5270 Ft West from Southeast Corner
Sec 16 Twp 13S Rge 21 East XX West

Other (explain).....
(purchased from city, R.W.D. #)

INSTRUCTIONS: This form shall be completed in duplicate and filed with the Kansas Corporation Commission, 200 Colorado Derby Building, Wichita, Kansas 67202, within 90 days after completion or recompletion of any well. Rule 82-3-130 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 drillers time log shall be attached with this form. 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..... Secretary/ Treasurer Date 11/26/85

Subscribed and sworn to before me this 5TH day of DECEMBER 1985

Notary Public.....

Date Commission Expires..... My Commission Expires Jan. 14, 1993

16003 E. Greenwood Dr.
Aurora, Colorado 80013

K.C.C. OFFICE USE ONLY

☒	Letter of Confidentiality Attached
☒	Wireline Log Received
☒	Drillers Timelog Received
Distribution	
☒ KCC	☐ SWD/Rep
☒ KGS	☐ Plug
☐	☐ NGPA
☐	☐ Other
(Specify)	

Form ACO-1 (7-84)

12-09-85
DEC 9 1985

SIDE TWO

15-195-21703-00-00

Operator Name HBP/SETCO Lease Name..... Kroeger "D" Well #..... 23-9
Sec..... 23 Twp..... 13S Rge..... 21 ☐ East
☒ West County..... Trego.....

WELL LOG

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
Samples Sent to Geological Survey ☐ Yes ☒ No
Cores Taken ☐ Yes ☒ No

Formation Description
☐ Log ☒ Sample

Name	Top	Bottom
Lime	0	262'
Shale & sand	262'	940'
Shale	940'	1584'
Anyhydrite	1584'	1620'
Shale	1620'	2240'
Shale & lime	2240'	3564'
Lime	3564'	3633'
Lime & shale	3633'	3740'
Lime	3740'	3830'
Lime & shale	3830'	3892'
Lime	3892'	4050'

See attached data sheets.

CONFIDENTIAL**RELEASED****FEB 16 1987****FROM CONFIDENTIAL**

Rotary Total Depth 4050'

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	12-1/4	8-5/8	22.3#	257'	60/40poz	165	35cc 2%gel
production	7-7/8	4-1/2	10.5#	4050'	Lite	375	10% gel 25# flo.
					60/40poz	125	2%gel 10%salt

PERFORATION RECORD

Acid, Fracture, Shot, Cement Squeeze Record

Shots Per Foot	Specify Footage of Each Interval Perforated	(Amount and Kind of Material Used)	Depth
2	3863'-3900' (37' net)	500 gal 15% MCA	perfs
		3700 gal MOD 202 w/ 300 bbl	perfs
		KCl water flush	

TUBING RECORD

Size

Set At

Packer at

Liner Run

☐ Yes ☐ No

none

Date of First Production

Producing Method

☐ Flowing ☐ Pumping ☐ Gas Lift ☐ Other (explain).....Estimated Production
Per 24 Hours

Oil

Gas

Water

Gas-Oil-Ratio

Gravity

1.5 Bbls

0 MCF

25 Bbls

CFPB

METHOD OF COMPLETION

Production Interval

Disposition of gas: ☐ Vented☐ Sold☐ Used on Lease☐ Open Hole☐ Perforation☐ Other (Specify)

XX Non-commercial completion.
Preparing to P & A.

☐ Dually Completed
☐ Commingled

15-195-21703-00-00

WESTERN TESTING CO. INC.
SUBSURFACE PRESSURE SURVEY**CONFIDENTIAL**

DATE: 9-27-85
 CUSTOMER: HELD BY PRODUCTION INC/SETCO
 WELL: 23-9-D TEST: 1
 ELEVATION (KB): 2235 FORMATION: TOPEKA
 SECTION: 23 TOWNSHIP: 13S
 RANGE: 21W COUNTY: TREGO STATE: KANSAS
 GAUGE SN #13762 RANGE: 3925 CLOCK: 12

INTERVAL TEST FROM: 3294 FT TO: 3314 FT TOTAL DEPTH: 3314 FT
 DEPTH OF SELECTIVE ZONE: FT
 PACKER DEPTH: 3289 FT SIZE: 6 5/8 IN PACKER DEPTH: 3294 FT SIZE: 6 5/8 IN
 PACKER DEPTH: FT SIZE: IN PACKER DEPTH: FT SIZE: IN

DRILLING CONTRACTOR: H-30 DRLG. RIG #11
 MUD TYPE: DRISPAC VISCOSITY: 58
 WEIGHT: 8.7 WATER LOSS (CC): 7.2
 CHLORIDES (P.P.M.): 4000
 JARS - MAKE: SERIAL NUMBER:
 DID WELL FLOW? NO REVERSED OUT?
 DRILL COLLAR LENGTH: FT I.D.: IN
 WEIGHT PIPE LENGTH: FT I.D.: IN
 DRILL PIPE LENGTH: 3267 FT I.D.: 3.8 IN
 TEST TOOL LENGTH: 27 FT TOOL SIZE: 5 1/2 OD IN
 ANCHOR LENGTH: 20 FT SIZE: 5 1/2 OD IN
 SURFACE CHOKE SIZE: 3/4 IN BOTTOM CHOKE SIZE: 3/4 IN
 MAIN HOLE SIZE: 7 7/8 IN TOOL JOINT SIZE: 4 1/2 XH IN

BLOW: INITIAL FLOW PERIOD WEAK BLOW BUILDING TO A
 FAIR BLOW; BLOW REMAINED THROUGHOUT PERIOD.
 FINAL FLOW PERIOD FAIR BLOW BUILDING TO A
 STRONG BLOW OFF BOTTOM OF BUCKET IN 18 MINUTES.

RECOVERED: 30 FT OF: MUDDY WATER.
 RECOVERED: 240 FT OF: SALT WATER.
 RECOVERED: FT OF: CHLORIDES 80000 PPM.
 RECOVERED: FT OF:
 RECOVERED: FT OF:
 RECOVERED: FT OF:
 RECOVERED: FT OF:
 RECOVERED: FT OF:
 RECOVERED: FT OF:

REMARKS:

TIME SET PACKER(S): 8:55 PM
 WELL TEMPERATURE: 112 °F
 INITIAL HYDROSTATIC PRESSURE:
 INITIAL FLOW PERIOD MIN: 10
 INITIAL CLOSED IN PERIOD MIN: 30
 FINAL FLOW PERIOD MIN: 60
 FINAL CLOSED IN PERIOD MIN: 120
 FINAL HYDROSTATIC PRESSURE

TIME STARTED OFF BOTTOM: 12:35 AM

(A) 1545 PSI
 (B) 52 PSI TO (C) 57 PSI
 (D) 1048 PSI
 (E) 71 PSI TO (F) 159 PSI
 (G) 1048 PSI
 (H) 1507 PSI

DEC 11 1985
 State Geological Survey
 WICHITA BRANCH
 RELEASED
 FEB 16 1987
 FROM CONFIDENTIAL

STATE CORPORATION COMMISSION

DEC 9 1985

CONSERVATION DIVISION

15-195-21703-00-00

WESTERN TESTING CO. INC.
PRESSURE DATA

DATE: 9-27-85
 CUSTOMER: HELD BY PRODUCTION INC/SETCO
 WELL: 23-9-D TEST: 1
 ELEVATION (KB): 2235
 SECTION: 23
 RANGE: 21W
 GAUGE SN #13762

COUNTY: TREGO
 RANGE: 3925

TICKET #10446
 LEASE: KROEGER
 GEOLOGIST: M.T. ECKELS
 FORMATION: TOPEKA
 TOWNSHIP: 13S
 STATE: KANSAS
 CLOCK: 12

(A) INITIAL HYDROSTATIC PRESSURE: 1545 PSI
 (B) FIRST INITIAL FLOW PRESSURE: 52 PSI
 (C) FIRST FINAL FLOW PRESSURE: 57 PSI
 (D) INITIAL CLOSED-IN PRESSURE: 1048 PSI
 (E) SECOND INITIAL FLOW PRESSURE: 71 PSI
 (F) SECOND FINAL FLOW PRESSURE: 159 PSI
 (G) FINAL CLOSED-IN PRESSURE: 1048 PSI
 (H) FINAL HYDROSTATIC PRESSURE: 1507 PSI
 WELL TEMPERATURE: 112 °F
 OPEN TOOL: 8:55 PM

CONFIDENTIAL

	TIME - GIVEN	TIME - ACTUAL
FIRST FLOW PRESSURE:	10 MIN	10 MIN
INITIAL CLOSED-IN PRESSURE:	30 MIN	30 MIN
SECOND FLOW PRESSURE:	60 MIN	60 MIN
FINAL CLOSED-IN PRESSURE:	120 MIN	120 MIN

PRESSURE BREAKDOWN

PT	FIRST FLOW		INITIAL SHUT-IN		SECOND FLOW		FINAL SHUT-IN	
	MIN	PRESSURE	MIN	PRESSURE	MIN	PRESSURE	MIN	PRESSURE
1	0	52	0	57	0	71	0	159
2	5	53	3	946	5	72	3	885
3	10	57	6	989	10	74	6	935
4			9	1011	15	81	9	960
5			12	1026	20	90	12	978
6			15	1034	25	103	15	990
7			18	1040	30	111	18	998
8			21	1044	35	119	21	1003
9			24	1047	40	127	24	1008
10			27	1048	45	136	27	1011
11			30	1048	50	145	30	1014
12					55	153	33	1017
13					60	159	36	1020
14							39	1022
15							42	1024
16							45	1026
17							48	1028
18							51	1030
19							54	1032
20							57	1034
21							60	1036
22							63	1037
23							66	1038
24							69	1039
25							72	1040
26							75	1041
27							78	1041
28							81	1042
29							84	1042
30							87	1043

REC 1175985
 State Geological Survey
 WICHITA BRANCH

WESTERN TESTING CO. INC.
SUBSURFACE PRESSURE SURVEY

15-195-21703-00-00

DATE: 9-28-85
CUSTOMER: HELD BY PRODUCTION INC/SETCO
WELL: 23-9-D
ELEVATION (KB): 2242
SECTION: 23
RANGE: 21W
GAUGE SN #13362

TICKET #9918
LEASE: KROEGER
GEOLOGIST: W.G. TOLER
FORMATION: LANSING 'A'
TOWNSHIP: 13S
COUNTY: TREGO
STATE: KANSAS
RANGE: 4450
LOCK: 12

CONFIDENTIAL

INTERVAL TEST FROM: 3534 FT TO: 3564 FT TOTAL DEPTH: 3564 FT
DEPTH OF SELECTIVE ZONE: FT
PACKER DEPTH: 3529 FT SIZE: 6 5/8 IN PACKER DEPTH: 3534 FT SIZE: 6 5/8 IN
PACKER DEPTH: FT SIZE: IN PACKER DEPTH: FT SIZE: IN

DRILLING CONTRACTOR: H-30 DRLG. RIG #11
MUD TYPE: CHEMICAL VISCOSITY: 48
WEIGHT: 9.0 WATER LOSS (CC): 7.2
CHLORIDES (P.P.M.): 5000

JARS - MAKE: SERIAL NUMBER:
DID WELL FLOW? REVERSED OUT?

DRILL COLLAR LENGTH:	FT	I.D.:	IN
WEIGHT PIPE LENGTH:	FT	I.D.:	IN
DRILL PIPE LENGTH:	3503 FT	I.D.:	3.8 IN
TEST TOOL LENGTH:	31 FT	TOOL SIZE:	5 1/2 OD IN
ANCHOR LENGTH:	30 FT	SIZE:	5 1/2 OD IN
SURFACE CHOKE SIZE:	3/4 IN	BOTTOM CHOKE SIZE:	3/4 IN
MAIN HOLE SIZE:	7 7/8 IN	TOOL JOINT SIZE:	4 1/2 XH IN

BLOW: INITIAL FLOW PERIOD WEAK BLOW
(1/4 INCH IN BUCKET).
FINAL FLOW PERIOD WEAK BLOW;
DIED.

RECOVERED: 5	FT	OF: MUD WITH FEW SPOTS OF OIL.
RECOVERED:	FT	OF: CHLORIDES 5000 PPM.
RECOVERED:	FT	OF: FLUID SAMPLER: OIL SPOTTED MUD.
RECOVERED:	FT	OF:
RECOVERED:	FT	OF:
RECOVERED:	FT	OF:
RECOVERED:	FT	OF:
RECOVERED:	FT	OF:
RECOVERED:	FT	OF:

REMARKS:

DEC 11 1985
State Geological Survey
WICHITA BRANCH

TIME SET PACKER(S): 9:05 PM
WELL TEMPERATURE: 107 °F
INITIAL HYDROSTATIC PRESSURE:
INITIAL FLOW PERIOD MIN: 10
INITIAL CLOSED IN PERIOD MIN: 27
FINAL FLOW PERIOD MIN: 30
FINAL CLOSED IN PERIOD MIN: 30
FINAL HYDROSTATIC PRESSURE

TIME STARTED OFF BOTTOM: 10:45 PM

(A) 1634	PSI
(B) 85	PSI TO (C) 85 PSI
(D) 697	PSI
(E) 83	PSI TO (F) 83 PSI
(G) 615	PSI
(H) 1634	PSI

WESTERN TESTING CO. INC.
PRESSURE DATA

15-195-21703-06-00

DATE: 9-28-85
CUSTOMER: HELD BY PRODUCTION INC/SETCO
WELL: 23-9-D TEST: 2
ELEVATION (KB): 2242
SECTION: 23
RANGE: 21W
GAUGE SN #13362

COUNTY: TREGO
RANGE: 4450

FORMATION:
TOWNSHIP: 13S

TICKET #9918
LEASE: KROEGER
GEOLOGIST: W.G. TOLER
LANSING "A"
STATE: KANSAS
CLOCK: 12

(A) INITIAL HYDROSTATIC PRESSURE: 1634 PSI
(B) FIRST INITIAL FLOW PRESSURE: 85 PSI
(C) FIRST FINAL FLOW PRESSURE: 85 PSI
(D) INITIAL CLOSED-IN PRESSURE: 697 PSI
(E) SECOND INITIAL FLOW PRESSURE: 83 PSI
(F) SECOND FINAL FLOW PRESSURE: 83 PSI
(G) FINAL CLOSED-IN PRESSURE: 615 PSI
(H) FINAL HYDROSTATIC PRESSURE: 1634 PSI
WELL TEMPERATURE: 107 °F
OPEN TOOL: 9:05 PM

CONFIDENTIAL

	TIME - GIVEN	TIME - ACTUAL
FIRST FLOW PRESSURE:	10 MIN	10 MIN
INITIAL CLOSED-IN PRESSURE:	30 MIN	27 MIN
SECOND FLOW PRESSURE:	30 MIN	30 MIN
FINAL CLOSED-IN PRESSURE:	30 MIN	30 MIN

PRESSURE BREAKDOWN

PT	FIRST FLOW		INITIAL SHUT-IN		SECOND FLOW		FINAL SHUT-IN	
	MIN	PRESSURE	MIN	PRESSURE	MIN	PRESSURE	MIN	PRESSURE
1	0	85	0	85	0	83	0	83
2	5	85	3	85	5	83	3	83
3	10	85	6	85	10	83	6	87
4			9	85	15	83	9	128
5			12	98	20	83	12	235
6			15	262	25	83	15	332
7			18	428	30	83	18	410
8			21	540			21	473
9			24	615			24	517
10			27	697			27	557
11							30	615
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DEC 11 1985
State Geological Survey
WICHITA BRANCH

WESTERN TESTING CO. INC.
SUBSURFACE PRESSURE SURVEY

15-195-21703-00-00

DATE: 9-29-85
CUSTOMER: HELD BY PRODUCTION INC/SETCO
WELL: 23-9-D TEST: 3
ELEVATION (KB): 2242
SECTION: 23
RANGE: 21W
GAUGE SN #13362

FORMATION:
TOWNSHIP: 13S
COUNTY: TREGO
RANGE: 4450

TICKET #9919
LEASE: KROEGER
GEOLOGIST: W.G. TOLER
STATE: KANSAS
CLOCK: 12

INTERVAL TEST FROM: 3718 FT TO: 3740 FT TOTAL DEPTH: 3740 FT
DEPTH OF SELECTIVE ZONE: FT
PACKER DEPTH: 3713 FT SIZE: 6 5/8 IN PACKER DEPTH: 3718 FT SIZE: 6 5/8 IN
PACKER DEPTH: FT SIZE: IN PACKER DEPTH: FT SIZE: IN

CONFIDENTIAL.

DRILLING CONTRACTOR: H-30 DRLG. RIG #11

MUD TYPE: CHEMICAL

VISCOSITY: 44

WEIGHT: 9.0

WATER LOSS (CC): 7.2

CHLORIDES (P.P.M.): 9000

JARS - MAKE:

SERIAL NUMBER:

DID WELL FLOW?

REVERSED OUT?

DRILL COLLAR LENGTH:

FT I.D.: IN

WEIGHT PIPE LENGTH:

FT I.D.: IN

DRILL PIPE LENGTH: 3692

FT I.D.: 3.8 IN

TEST TOOL LENGTH: 26

FT TOOL SIZE: 5 1/2 OD IN

ANCHOR LENGTH: 22

FT SIZE: 5 1/2 OD IN

SURFACE CHOKE SIZE: 3/4

IN BOTTOM CHOKE SIZE: 3/4 IN

MAIN HOLE SIZE: 7 7/8

IN TOOL JOINT SIZE: 4 1/2 XH IN

BLOW: INITIAL FLOW PERIOD WEAK BLOW;
(1/2 INCH IN BUCKET).
FINAL FLOW PERIOD NO BLOW.

RECOVERED: 2 FT OF: OIL CUT MUD 1% OIL.
RECOVERED: FT OF: CHLORIDES 9000 PPM.
RECOVERED: FT OF: FLUID SAMPLER: OIL CUT MUD - 1% OIL.
RECOVERED: FT OF:
RECOVERED: FT OF:
RECOVERED: FT OF:
RECOVERED: FT OF:
RECOVERED: FT OF:
RECOVERED: FT OF:
RECOVERED: FT OF:

REMARKS:

TIME SET PACKER(S): 7:25 PM
WELL TEMPERATURE: 109 °F
INITIAL HYDROSTATIC PRESSURE:
INITIAL FLOW PERIOD MIN: 10
INITIAL CLOSED IN PERIOD MIN: 30
FINAL FLOW PERIOD MIN: 30
FINAL CLOSED IN PERIOD MIN: 30
FINAL HYDROSTATIC PRESSURE

TIME STARTED OFF BOTTOM: 9:05 PM

(A) 1752 PSI
(B) 62 PSI TO (C) 62 PSI
(D) 66 PSI
(E) 63 PSI TO (F) 63 PSI
(G) 65 PSI
(H) 1752 PSI

WESTERN TESTING CO. INC.
PRESSURE DATA

15-195-21703-00-00

DATE: 9-29-85

CUSTOMER: HELD BY PRODUCTION INC/SETCO

WELL: 23-9-D

TEST: 3

ELEVATION (KB): 2242

FORMATION:

SECTION: 23

TOWNSHIP: 13S

RANGE: 21W

COUNTY: TREGO

STATE: KANSAS

GAUGE SN #13362

RANGE: 4450

CLOCK: 12

(A) INITIAL HYDROSTATIC PRESSURE: 1752 PSI
(B) FIRST INITIAL FLOW PRESSURE: 62 PSI
(C) FIRST FINAL FLOW PRESSURE: 62 PSI
(D) INITIAL CLOSED-IN PRESSURE: 66 PSI
(E) SECOND INITIAL FLOW PRESSURE: 63 PSI
(F) SECOND FINAL FLOW PRESSURE: 63 PSI
(G) FINAL CLOSED-IN PRESSURE: 65 PSI
(H) FINAL HYDROSTATIC PRESSURE: 1752 PSI
WELL TEMPERATURE: 109 °F
OPEN TOOL: 7:25 PM

CONFIDENTIAL

	TIME - GIVEN	TIME - ACTUAL
FIRST FLOW PRESSURE:	10 MIN	10 MIN
INITIAL CLOSED-IN PRESSURE:	30 MIN	30 MIN
SECOND FLOW PRESSURE:	30 MIN	30 MIN
FINAL CLOSED-IN PRESSURE:	30 MIN	30 MIN

PRESSURE BREAKDOWN

PT	FIRST FLOW		INITIAL SHUT-IN		SECOND FLOW		FINAL SHUT-IN	
	MIN	PRESSURE	MIN	PRESSURE	MIN	PRESSURE	MIN	PRESSURE
1	0	62	0	62	0	63	0	63
2	5	62	3	62	5	63	3	64
3	10	62	6	62	10	63	6	65
4			9	62	15	63	9	65
5			12	62	20	63	12	65
6			15	62	25	63	15	65
7			18	63	30	63	18	65
8			21	64			21	65
9			24	65			24	65
10			27	66			27	65
11			30	66			30	65
12								
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DEC 11 1985

Geological Survey
DATA BRANCH

WESTERN TESTING CO. INC.
PRESSURE DATA

15-195-21703 -00-00

DATE: 9-30-85
CUSTOMER: HELD BY PRODUCTION INC/SETCO
WELL: 23-9-D TEST: 4
ELEVATION (KB): 2242 FORMATION: MARMATON
SECTION: 23 TOWNSHIP: 13S
RANGE: 21W COUNTY: TREGO STATE: KANSAS
GAUGE SN #13362 RANGE: 4450 CLOCK: 12

(A) INITIAL HYDROSTATIC PRESSURE: 1834 PSI
(B) FIRST INITIAL FLOW PRESSURE: 86 PSI
(C) FIRST FINAL FLOW PRESSURE: 86 PSI
(D) INITIAL CLOSED-IN PRESSURE: 1035 PSI
(E) SECOND INITIAL FLOW PRESSURE: 86 PSI
(F) SECOND FINAL FLOW PRESSURE: 96 PSI
(G) FINAL CLOSED-IN PRESSURE: 846 PSI
(H) FINAL HYDROSTATIC PRESSURE: 1834 PSI
WELL TEMPERATURE: 120 °F
OPEN TOOL: 3:55 PM

CONFIDENTIAL

	TIME - GIVEN	TIME - ACTUAL
FIRST FLOW PRESSURE:	10 MIN	10 MIN
INITIAL CLOSED-IN PRESSURE:	30 MIN	30 MIN
SECOND FLOW PRESSURE:	90 MIN	90 MIN
FINAL CLOSED-IN PRESSURE:	180 MIN	174 MIN

PRESSURE BREAKDOWN								
PT	FIRST FLOW		INITIAL SHUT-IN		SECOND FLOW		FINAL SHUT-IN	
	MIN	PRESSURE	MIN	PRESSURE	MIN	PRESSURE	MIN	PRESSURE
1	0	86	0	86	0	86	0	96
2	5	86	3	513	5	86	3	136
3	10	86	6	763	10	86	6	278
4			9	862	15	86	9	365
5			12	913	20	86	12	421
6			15	946	25	87	15	460
7			18	973	30	88	18	493
8			21	1000	35	89	21	518
9			24	1013	40	90	24	544
10			27	1033	45	91	27	568
11			30	1035	50	91	30	584
12					55	91	33	604
13					60	91	36	613
14					65	91	39	622
15					70	91	42	633
16					75	91	45	642
17					80	92	48	653
18					85	94	51	662
19					90	96	54	670
20							57	683
21							60	690
22							63	697
23							66	706
24							69	711
25							72	716
26							75	721
27							78	727
28							81	734
29							84	740
30							87	746

PRESSURE BREAKDOWN - CONT. TICKET #9920

15-195-21703-00-00

#	FIRST FLOW		INITIAL SHUT-IN		SECOND FLOW		FINAL SHUT-IN	
	MIN	PRESSURE	MIN	PRESSURE	MIN	PRESSURE	MIN	PRESSURE
31							90	752
32							93	756
33							96	760
34							99	765
35							102	769
36							105	774
37							108	780
38							111	784
39							114	788
40							117	790
41							120	782
42							123	794
43							126	797
44							129	800
45							132	805
46							135	810
47							138	815
48							141	818
49							144	821
50							147	823
51							150	826
52							153	829
53							156	832
54							159	835
55							162	838
56							165	840
57							168	842
58							171	844
59							174	846
60								
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CONFIDENTIAL

DEC 11 1985

State Geological Survey
WICHITA BRANCH

WESTERN TESTING CO. INC.
SUBSURFACE PRESSURE SURVEY

15-195-21703-00-00

DATE: 10-1-85
CUSTOMER: HELD BY PRODUCTION INC/SETCO
WELL: 23-9-D TEST: 5
ELEVATION (KB): 2242 FORMATION: ARBUCKLE
SECTION: 23 TOWNSHIP: 13S
RANGE: 21W COUNTY: TREGO STATE: KANSAS
GAUGE SN #13362 RANGE: 4450 CLOCK: 12

TICKET #9921
LEASE: KROEGER
GEOLOGIST: M. ECKLES

INTERVAL TEST FROM: 3933 FT TO: 3943 FT TOTAL DEPTH: 3943 FT
DEPTH OF SELECTIVE ZONE: FT
PACKER DEPTH: 3928 FT SIZE: 6 5/8 IN PACKER DEPTH: 3933 FT SIZE: 6 5/8 IN
PACKER DEPTH: FT SIZE: IN PACKER DEPTH: FT SIZE: IN

DRILLING CONTRACTOR: H-30 DRLG. RIG #11
MUD TYPE: CHEMICAL VISCOSITY: 42
WEIGHT: 9.3 WATER LOSS (CC): 8.0
CHLORIDES (P.P.M.): 9000

JARS - MAKE: SERIAL NUMBER:
DID WELL FLOW? REVERSED OUT?

DRILL COLLAR LENGTH: FT I.D.: IN
WEIGHT PIPE LENGTH: FT I.D.: IN
DRILL PIPE LENGTH: 3907 FT I.D.: 3.8 IN
TEST TOOL LENGTH: 26 FT TOOL SIZE: 5 1/2 OD IN
ANCHOR LENGTH: 10 FT SIZE: 5 1/2 OD IN
SURFACE CHOKE SIZE: 3/4 IN BOTTOM CHOKE SIZE: 3/4 IN
MAIN HOLE SIZE: 7 7/8 IN TOOL JOINT SIZE: 4 1/2 XH IN

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BLOW: INITIAL FLOW PERIOD WEAK BLOW;
(1/4 INCH IN BUCKET).
FINAL FLOW PERIOD NO BLOW;
FLUSHED TOOL; NO BLOW.

RECOVERED: 1 FT OF: MUD - SLIGHT OIL SCUM.
RECOVERED: FT OF: SAMPLER: MUD - SLIGHT OIL SCUM.
RECOVERED: FT OF:
RECOVERED: FT OF:
RECOVERED: FT OF:
RECOVERED: FT OF:
RECOVERED: FT OF:
RECOVERED: FT OF:
RECOVERED: FT OF:

DEC 11 1985
Field Geological Survey
MICHITA BRANCH

REMARKS:

TIME SET PACKER(S): 11:05 AM TIME STARTED OFF BOTTOM: 12:45 PM
WELL TEMPERATURE: 113 °F
INITIAL HYDROSTATIC PRESSURE: (A) 1875 PSI
INITIAL FLOW PERIOD MIN: 15 (B) 61 PSI TO (C) 61 PSI
INITIAL CLOSED IN PERIOD MIN: 30 (D) 61 PSI
FINAL FLOW PERIOD MIN: 25 (E) 61 PSI TO (F) 84 PSI
FINAL CLOSED IN PERIOD MIN: 30 (G) 92 PSI
FINAL HYDROSTATIC PRESSURE (H) 1875 PSI

WESTERN TESTING CO. INC.
PRESSURE DATA

15-195-21703-00-00

DATE: 10-1-85

CUSTOMER: HELD BY PRODUCTION INC/SETCO

WELL: 23-9-D

TEST: 5

ELEVATION (KB): 2242

FORMATION: ARBUCKLE

SECTION: 23

TOWNSHIP: 13S

RANGE: 21W

COUNTY: TREGO

STATE: KANSAS

GAUGE SN #13362

RANGE: 4450

CLOCK: 12

TICKET #9921

LEASE: KROEGER

GEOLOGIST: M. ECKLES

(A) INITIAL HYDROSTATIC PRESSURE: 1875 PSI
(B) FIRST INITIAL FLOW PRESSURE: 61 PSI
(C) FIRST FINAL FLOW PRESSURE: 61 PSI
(D) INITIAL CLOSED-IN PRESSURE: 61 PSI
(E) SECOND INITIAL FLOW PRESSURE: 61 PSI
(F) SECOND FINAL FLOW PRESSURE: 84 PSI
(G) FINAL CLOSED-IN PRESSURE: 92 PSI
(H) FINAL HYDROSTATIC PRESSURE: 1875 PSI
WELL TEMPERATURE: 113 °F
OPEN TOOL: 11:05 AM

CONFIDENTIAL

	TIME - GIVEN	TIME - ACTUAL
FIRST FLOW PRESSURE:	10 MIN	15 MIN
INITIAL CLOSED-IN PRESSURE:	30 MIN	30 MIN
SECOND FLOW PRESSURE:	30 MIN	25 MIN
FINAL CLOSED-IN PRESSURE:	30 MIN	30 MIN

PRESSURE BREAKDOWN

PT	FIRST FLOW		INITIAL SHUT-IN		SECOND FLOW		FINAL SHUT-IN	
	MIN	PRESSURE	MIN	PRESSURE	MIN	PRESSURE	MIN	PRESSURE
1	0	61	0	61	0	61	0	84
2	5	61	3	61	5	61	3	84
3	10	61	6	61	10	61	6	84
4	15	61	9	61	15	134	9	84
5			12	61	20	92	12	85
6			15	61	25	84	15	85
7			18	61			18	86
8			21	61			21	87
9			24	61			24	88
10			27	61			27	90
11			30	61			30	92
12								
13								
14								
15								
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DEC 11 1985
Geological Survey
WICHITA BRANCH

WESTERN TESTING CO. INC.
SUBSURFACE PRESSURE SURVEY

15-195-21703-00-00

DATE: 10-2-85
CUSTOMER: HELD BY PRODUCTION INC/SETCO
WELL: 23-9-D TEST: 6
ELEVATION (KB): 2242 FORMATION: LANSING J
SECTION: 23 TOWNSHIP: 13S
RANGE: 21W COUNTY: TREGO STATE: KANSAS
GAUGE SN #13362 RANGE: 4450 CLOCK: 12

INTERVAL TEST FROM: 3720 FT TO: 3743 FT TOTAL DEPTH: 4050 FT
DEPTH OF SELECTIVE ZONE: FT
PACKER DEPTH: 3715 FT SIZE: 6 5/8 IN PACKER DEPTH: 3720 FT SIZE: 6 5/8 IN
PACKER DEPTH: 3743 FT SIZE: 6 5/8 IN PACKER DEPTH: 3748 FT SIZE: 6 5/8 IN

DRILLING CONTRACTOR: H-30 DRLG. RIG #11
MUD TYPE: CHEMICAL VISCOSITY: 37
WEIGHT: 9.6 WATER LOSS (CC): 10.4

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CHLORIDES (P.P.M.): 5500
JARS - MAKE: BOWEN SERIAL NUMBER: 420
DID WELL FLOW? REVERSED OUT?

DRILL COLLAR LENGTH: FT I.D.: IN
WEIGHT PIPE LENGTH: FT I.D.: IN
DRILL PIPE LENGTH: 3996 FT I.D.: 3.8 IN
TEST TOOL LENGTH: 31 FT TOOL SIZE: 5 1/2 OD IN
ANCHOR LENGTH: 23 FT SIZE: 5 1/2 OD IN
SURFACE CHOKE SIZE: 3/4 IN BOTTOM CHOKE SIZE: 3/4 IN
MAIN HOLE SIZE: 7 7/8 IN TOOL JOINT SIZE: 4 1/2 XH IN

BLOW: INITIAL FLOW PERIOD VERY WEAK
SLOW BUILDING BLOW. FINAL FLOW
PERIOD NO BLOW.

RECOVERED: 5 FT OF: MUD.
RECOVERED: FT OF: SAMPLER: MUD - NO SHOW OF OIL.
RECOVERED: FT OF: CHLORIDES 10000 PPM.
RECOVERED: FT OF:
RECOVERED: FT OF:
RECOVERED: FT OF:
RECOVERED: FT OF:
RECOVERED: FT OF:
RECOVERED: FT OF:

REMARKS:

TIME SET PACKER(S): 9:00 PM

TIME STARTED OFF BOTTOM: 1:30 AM

WELL TEMPERATURE: 108 °F

INITIAL HYDROSTATIC PRESSURE:

(A) 1810 PSI
(B) 90 PSI TO (C) 90 PSI
(D) 252 PSI
(E) 94 PSI TO (F) 94 PSI
(G) 630 PSI
(H) 1801 PSI

INITIAL FLOW PERIOD MIN: 30

INITIAL CLOSED IN PERIOD MIN: 60

FINAL FLOW PERIOD MIN: 60

FINAL CLOSED IN PERIOD MIN: 114

FINAL HYDROSTATIC PRESSURE

WESTERN TESTING CO. INC.
PRESSURE DATA

15-195-21703-00-00

DATE: 10-2-85
CUSTOMER: HELD BY PRODUCTION INC/SETCO
WELL: 23-9-D TEST: 6
ELEVATION (KB): 2242
SECTION: 23
RANGE: 21W COUNTY: TREGO
GAUGE SN #13362 RANGE: 4450

TICKET #9922
LEASE: KROEGER
GEOLOGIST: W.G. TOLER
FORMATION: LANSING J
TOWNSHIP: 13S
STATE: KANSAS
CLOCK: 12

(A) INITIAL HYDROSTATIC PRESSURE: 1810 PSI
(B) FIRST INITIAL FLOW PRESSURE: 90 PSI
(C) FIRST FINAL FLOW PRESSURE: 90 PSI
(D) INITIAL CLOSED-IN PRESSURE: 252 PSI
(E) SECOND INITIAL FLOW PRESSURE: 94 PSI
(F) SECOND FINAL FLOW PRESSURE: 94 PSI
(G) FINAL CLOSED-IN PRESSURE: 630 PSI
(H) FINAL HYDROSTATIC PRESSURE: 1801 PSI
WELL TEMPERATURE: 108 °F
OPEN TOOL: 9:00 PM

CONFIDENTIAL

	TIME - GIVEN	TIME - ACTUAL
FIRST FLOW PRESSURE:	30 MIN	30 MIN
INITIAL CLOSED-IN PRESSURE:	60 MIN	60 MIN
SECOND FLOW PRESSURE:	60 MIN	60 MIN
FINAL CLOSED-IN PRESSURE:	120 MIN	114 MIN

PRESSURE BREAKDOWN

PT	FIRST FLOW		INITIAL SHUT-IN		SECOND FLOW		FINAL SHUT-IN	
	MIN	PRESSURE	MIN	PRESSURE	MIN	PRESSURE	MIN	PRESSURE
1	0	90	0	90	0	94	0	94
2	5	90	3	90	5	94	3	94
3	10	90	6	90	10	94	6	94
4	15	90	9	90	15	94	9	94
5	20	90	12	90	20	94	12	94
6	25	90	15	91	25	94	15	94
7	30	90	18	92	30	94	18	94
8			21	93	35	94	21	94
9			24	96	40	94	24	94
10			27	100	45	94	27	95
11			30	103	50	94	30	95
12			33	105	55	94	33	95
13			36	107	60	94	36	97
14			39	110			39	100
15			42	115			42	103
16			45	121			45	108
17			48	130			48	114
18			51	146			51	120
19			54	174			54	127
20			57	213			57	140
21			60	252			60	159
22							63	187
23							66	210
24							69	240
25							72	264
26							75	287
27							78	320
28							81	351
29							84	374
30							87	401

10-2-85
SANTA FE BRANCH