#### WESTERN TESTING CO. INC. SUBSURFACE PRESSURE SURVEY

TICKET #19118 DATE: 11/15/83 LEASE: "B" HITTLE CUSTOMER: TOMCO DIL GEOLOGIST: D. TATUM WELL: 1 TEST: 1 FORMATION: LOWER HOOVER ELEVATION (KB): 1247 TOWNSHIP: 32S SECTION: 36 COUNTY: COWLEY STATE: KANSAS RANGE: 4E RANGE: 4200 GAUGE SN #13266 CLOCK: 12 INTERVAL TEST FROM: 1794 FT TO: 1804 FT TOTAL DEPTH: 1804

INTERVAL TEST FROM: 1794 FT TO: 1804 FT TOTAL DEPTH: 1804 FT

DEPTH OF SELECTIVE ZONE: FT

PACKER DEPTH: 1794 FT SIZE: 6 3/4 IN PACKER DEPTH: FT SIZE: IN

PACKER DEPTH: FT SIZE: IN PACKER DEPTH: FT SIZE: IN

DRILLING CONTRACTOR: WHITE & ELLIS #4 MUD TYPE: CHEMICAL VISCOSITY: 54 WEIGHT: 9.2 WATER LOSS (CC): 9.6 CHLORIDES (P.P.M.): 1400 JARS - MAKE: SERIAL NUMBER:
DID WELL FLOW? NO REVERSED OUT? N REVERSED OUT? NO IN DRILL COLLAR LENGTH: 180 FT I.D.: 2.25 WEIGHT PIPE LENGTH: FT I.D.: IN DRILL PIPE LENGTH: 1599 FT I.D.: 3.8 IN
TEST TOOL LENGTH: 15 FT TOOL SIZE: 5 1/2 O.D. IN
ANCHOR LENGTH: 10 FT SIZE: 5 1/2 O.D. IN
SURFACE CHOKE SIZE: 3/4 IN BOTTOM CHOKE SIZE: 3/4 MAIN HOLE SIZE: 7 7/8 IN TOOL JOINT SIZE: 4 1/2 X.H. IN

BLOW: FAIR DIMINISHING TO WEAK AT END OF TEST.

FT OF: GAS ABOVE FLUID RECOVERED: 60 FT OF: GAS CUT MUDDY SALT WATER RECOVERED: 180 FT OF: SALT WATER RECOVERED: 240 FT OF: CHLORIDES 55000 P.P.M. RECOVERED: RECOVERED: FT OF: RECOVERED: FT OF: RECOVERED: FT OF: RECOVERED: FT OF: FT OF: RECOVERED:

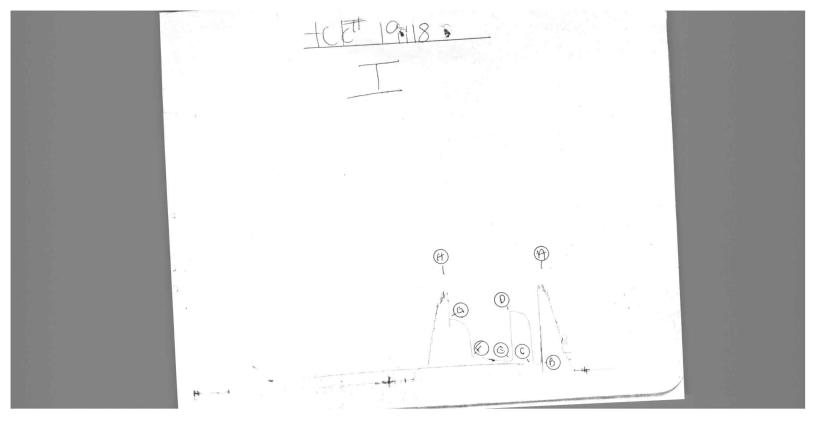
REMARKS:

TIME SET PACKER(S): 12:45 P.M.			TIME ST	ARTED	OFF	BOT	rom:	3:0	00 P.M.	
WELL TEMPERATURE: 92 'F										
INITIAL HYDROSTATIC PRESSURE:			(A)	888		PSI				
INITIAL FLOW PERIOD	MIH:	10	(B)	94		PSI	TO	(C)	98	PSI
INITIAL CLOSED IN PERIOD	MIN:	30	(D)	659		PSI				
FINAL FLOW PERIOD	MIN:	60	(E)	144		PSI	TO	(F)	220	PSI
FINAL CLOSED IN PERIOD	MIN:	30	(G)	612		PSI				
FINAL HYDROSTATIC PRESSURE			CHO	868		PSI				

## WESTERN TESTING CO. MHC. PRESSURE DATA

DATE: 11/15/83			TICKE	T #19118
CUSTOMER: TOMCO OIL			LEASE	B" HITTLE
WELL: 1	TEST: 1		GEOLOG	GIST: D. TATUM
ELEVATION (KB): 1247		FORMA	TION: LOWER	HOOVER
SECTION: 36		TOWNS	HIP: 325	
RANGE: 4E	COUNTY: COM	ILEY		: KANSAS
GAUGE SN #13266			CLOCK	
OHUGE 3N #13266	RANGE: 4200		CLUCK	: 12
(A) INITIAL HYDROSTATIC		3	PSI	
(B) FIRST INITIAL FLOW F	RESSURE: 94		PSI	
(C) FIRST FINAL FLOW PRE	SSURE: 98		PSI	
(D) INITIAL CLOSED-IN PR	ESSURE: 659	)	PSI	
(E) SECOND INITIAL FLOW	PRESSURE: 144		PSI	
(F) SECOND FINAL FLOW PR	RESSURE: 220	1	PSI	
(G) FINAL CLOSED-IN PRES			PSI	
TOTAL OCCUPED IN THE				
(H) FINAL HYDROSTATIC PR			PSI	
WELL TEMPERATURE:	92		'F	
OPEN TOOL: 12:45 P.M.				
	TIME - GIV	EN TIM	E - ACTUAL	
FIRST FLOW PRESSURE:	15 M	IIN 10	MIN	
INITIAL CLOSED-IN PRESSUR	E: 30 M	IIN 30	MIN	
SECOND FLOW PRESSURE:	200 to 10 10 10 10 10 10 10 10 10 10 10 10 10	IIN 60	MIN	
FINAL CLOSED-IN PRESSURE:		IIN 30	MIN	
TIME CLOSED-IN FRESSORE	. 30 I	1114 20	IN TH	

THEODORE BREINDOWN									
	FIRS	T FLOW	INITIA	L SHUT-IN	SECO	ND FLOW	FINAL	SHUT-IN	
PT	MIH	PRESSURE	MIH	PRESSURE	MIN	PRESSURE	MIH	PRESSURE	
1	0	94	0	98	0	144	0	220	
2	5	96	3	485	5	144	3	437	
3	10	98	6	570	10	145	6	513	
4			9	607	15	151	9	540	
5			12	626	20	157	12	562	
6			15	639	25	164	15	579	
7			18	646	30	172	18	591	
8			21	651	35	178	21	597	
9			24	655	40	186	24	603	
10			27	657	45	195	27	609	
11			30	659	5 <b>0</b>	204	30	612	
12					55	212			
13					60	220			
14									



#### WESTERN TESTING CO. INC. SUBSURFACE PRESSURE SURVEY

TICKET #19120 DATE: 11/19/83 LEASE: "B" HITTLE CUSTOMER: TOMCO DIL GEOLOGIST: M. DUBOIS TEST: 2 WELL: 1 ELEVATION (KB): 1247 FORMATION: CATTLEMAN SECTION: 36 TOWNSHIP: 325 COUNTY: COWLEY STATE: KANSAS RANGE: 4E GAUGE SN #13266 RANGE: 4200 CLOCK: 12 INTERVAL TEST FROM: 2960 FT TO: 2970 FT TOTAL DEPTH: 2970 DEPTH OF SELECTIVE ZONE: FT PACKER DEPTH: 2960 FT SIZE: 6 3/4 IN PACKER DEPTH: 2955 FT SIZE: 6 3/4 IN PACKER DEPTH: FT SIZE: IN PACKER DEPTH: FT SIZE: IN

DRILLING CONTRACTOR: WHITE & ELLIS #4 MUD TYPE: CHEMICAL VISCOSITY: 45 WEIGHT: 9.1 WATER LOSS (CC): 9.8 CHLORIDES (P.P.M.): 1300 JARS - MAKE: NO DID WELL FLOW? NO SERIAL NUMBER: REVERSED DUT? NO DRILL COLLAR LENGTH: 180 I.D.: 2.25 FT IH WEIGHT PIPE LENGTH: I.D.: FT IN FT I.D.: IN

FT I.D.: 3.8 IN

FT TOOL SIZE: 5 1/2 O.D. IN

FT SIZE: 5 1/2 O.D. IN

IN BOTTOM CHOKE SIZE: 3/4 DRILL PIPE LENGTH: 2760 TEST TOOL LENGTH: 20
ANCHOR LENGTH: 10 SURFACE CHOKE SIZE: 3/4 MAIN HOLE SIZE: 7 7/8 IH TOOL JOINT SIZE: 4 1/2 X.H. IN

BLOW: WEAK 5 MINUTES ON INITIAL FLOW PERIOD.

VERY WEAK 2 MINUTES ON FINAL FLOW PERIOD.

RECOVERED: 20 FT OF: DRILLING MUD WITH A VERY SLIGHT SHOW OF OIL RECOVERED: FT OF: RECOVERED: FT OF: RECOVERED: FT RECOVERED: FT OF: RECOVERED: FT OF: RECOVERED: FT OF: RECOVERED: FT OF: FT RECOVERED: OF:

REMARKS:

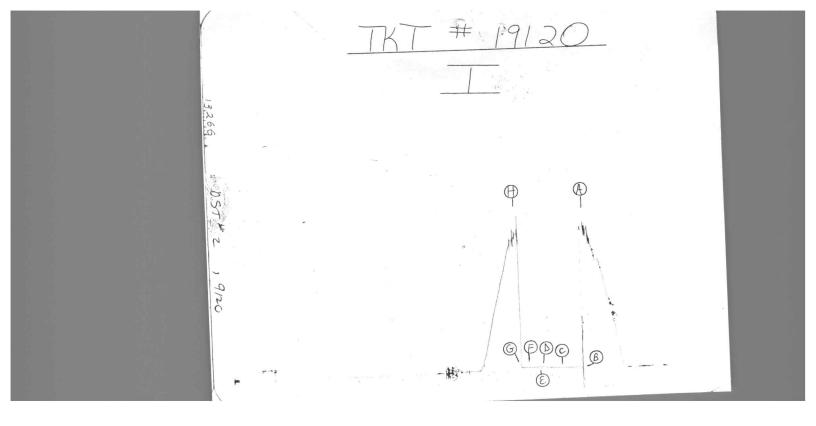
TIME SET PACKER(S): 9:00 A.M. TIME STARTED OFF BOTTOM: 10:30 A.M. WELL TEMPERATURE: 107 'F INITIAL HYDROSTATIC PRESSURE: (A) 1436 PSI INITIAL FLOW PERIOD MIH: 30 (B) 17 PSI TO (C) 20 PSI INITIAL CLOSED IN PERIOD MIN: 33 (D) 39 PSI MIN: 15 (E) 34 PSI TO (F) 34 PSI FINAL FLOW PERIOD MIN: 12 FINAL CLOSED IN PERIOD (G) 34 PSI (H) 1416 FINAL HYDROSTATIC PRESSURE PSI

# WESTERN TESTING CO. INC. PRESSURE DATA

DATE: 11/19/83				TICKET	#19120
CUSTOMER: TOMCO DIL				LEASE:	"B" HITTLE
WELL: 1	TEST: 2			GEOLOGI	ST: M. DUBOIS
ELEVATION (KB): 1247			FORMATION	: CATTLEM	IAN
SECTION: 36			TOWNSHIP:	325	
RANGE: 4E	COUNTY:	COMPE	Υ .	STATE:	KANSAS
GAUGE SN #13266	RANGE: 4	4200		CLOCK:	12
(A) INITIAL HYDROSTATIC PI	RESSURE:	1436	PSI		
(B) FIRST INITIAL FLOW PRI	ESSURE:	17	PSI		
(C) FIRST FINAL FLOW PRESS	SURE:	20	PSI		
(D) INITIAL CLOSED-IN PRES	SSURE:	39	PSI		
(E) SECOND INITIAL FLOW PI	RESSURE:	34	PSI		
(F) SECOND FINAL FLOW PRES	SSURE:	34	PSI		
(G) FINAL CLOSED-IN PRESS	URE:	34	PSI		
(H) FINAL HYDROSTATIC PRES	SSURE:	1416	PSI		
WELL TEMPERATURE:		107	'F		
OPEN TOOL: 9:00 A.M.					
	TIME -	GIVEN	TIME -	ACTUAL	
FIRST FLOW PRESSURE:	30	MIN	30	MIH	
INITIAL CLOSED-IN PRESSURE	: 30	MIN	33	MIH	
SECOND FLOW PRESSURE:	15	MIN	15	MIH	
FINAL CLOSED-IN PRESSURE:	15	MIN	12	MIN	

#### PRESSURE BREAKDOWN

	TRESSORE BRETINDOMIT							
	FIRS	T FLOW	INITIA	L SHUT-IN	SECO	ND FLOW	FINAL	SHUT-IN
PT	MIH	PRESSURE	MIH	PRESSURE	MIN	PRESSURE	MIH	PRESSURE
1	0	17	0	20	0	34	0	34
2	5	18	3	21	5	34	. 3	34
3	10	19	6	22	10	34	6	34
4	15	20	9	23	15	34	9	34
5	20	20	12	25			12	34
6	25	20	15	26				•
7	30	20	18	29				
8			21	32				
9			24	35				
10			27	37				
11			30	38				
12			33	39				
13								
14								
15								



### WESTERN TESTING CO. INC. SUBSURFACE PRESSURE SURVEY

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TICKET #19121 DATE: 11/19/83 LEASE: "B" HITTLE CUSTOMER: TOMCO DIL GEOLOGIST: T. BLAIR TEST: 3 WELL: 1 FORMATION: CATTLEMAN ELEVATION (KB): 1247 TOWNSHIP: 32S SECTION: 36 RANGE: 4E COUNTY: COWLEY STATE: KANSAS CLOCK: 12 GAUGE SN #13266 RANGE: 4200 INTERVAL TEST FROM: 2966 FT TO: 2977 FT TOTAL DEPTH: 2977 FT DEPTH OF SELECTIVE ZONE: FT PACKER DEPTH: 2966 FT SIZE: 6 3/4 IN PACKER DEPTH: 2961 FT SIZE: 6 3/4 IN PACKER DEPTH: FT SIZE: IN PACKER DEPTH: FT SIZE: IN DRILLING CONTRACTOR: WHITE & ELLIS #4 MUD TYPE: CHEMICAL VISCOSITY: 49 WEIGHT: 9.0 WATER LOSS (CC): 9.5 CHLORIDES (P.P.M.): 1300 JARS - MAKE: NO SERIAL NUMBER:
DID WELL FLOW? NO REVERSED OUT? N REVERSED OUT? NO DRILL COLLAR LENGTH: 180 FT I.D.: 2.25 IN WEIGHT PIPE LENGTH: FT I.D.: IN DRILL PIPE LENGTH: 2766 FT I.D.: 3.8 IN

TEST TOOL LENGTH: 20 FT TOOL SIZE: 5 1/2 O.D. IN

ANCHOR LENGTH: 11 FT SIZE: 5 1/2 O.D. 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 X.H. IN BLOW: FAIR TO WEAK ON INITIAL FLOW PERIOD. WEAK THRUOUT FINAL FLOW PERIOD. RECOVERED: 80 FT OF: MUDDY SALT WATER WITH VERY SLIGHT SHOW OF OIL RECOVERED: 120 FT OF: SALT WATER FT OF: CHLORIDES 31000 P.P.M. RECOVERED: FT OF: RECOVERED: RECOVERED: FT OF: RECOVERED: FT OF: FT OF: RECOVERED: RECOVERED: FT OF: RECOVERED: FT OF: REMARKS: TIME SET PACKER(S): 6:30 P.M. TIME STARTED OFF BOTTOM: 8:45 P.M. WELL TEMPERATURE: 107 'F (A) 1438 PSI INITIAL HYDROSTATIC PRESSURE: PSI TO (C) 64 PSI INITIAL FLOW PERIOD MIN: 30 (B) 45

(D) 318

(E) 114

(G) 322

(H) 1388

PSI

PSI

PSI

PSI TO (F) 117 PSI

MIN: 27

MIN: 30

INITIAL CLOSED IN PERIOD

FINAL CLOSED IN PERIOD MIN: 42
FINAL HYDROSTATIC PRESSURE

FINAL FLOW PERIOD

## WESTERN TESTING CO. INC. PRESSURE DATA

TICKET #19121 DATE: 11/19/83 CUSTOMER: TOMCO DIL LEASE: "B" HITTLE WELL: 1 TEST: 3 GEOLOGIST: T. BLAIR FORMATION: CATTLEMAN ELEVATION (KB): 1247 SECTION: 36 TOWNSHIP: 325 RANGE: 4E COUNTY: COWLEY STATE: KANSAS GAUGE SN #13266 RANGE: 4200 CLOCK: 12 (A) INITIAL HYDROSTATIC PRESSURE: 1438 PSI (B) FIRST INITIAL FLOW PRESSURE: 45 PSI (C) FIRST FINAL FLOW PRESSURE: 64 PSI (D) INITIAL CLOSED-IN PRESSURE: 318 PSI (E) SECOND INITIAL FLOW PRESSURE: 114 PSI (F) SECOND FINAL FLOW PRESSURE: 117 PSI (G) FINAL CLOSED-IN PRESSURE: 322 PSI (H) FINAL HYDROSTATIC PRESSURE: 1388 PSI WELL TEMPERATURE: 107 OPEN TOOL: 6:30 P.M. TIME - GIVEN TIME - ACTUAL FIRST FLOW PRESSURE: 30 MIN 30 INITIAL CLOSED-IN PRESSURE: 30 MIN 27 MIN SECOND FLOW PRESSURE: 30 MIN 30 MIN FINAL CLOSED-IN PRESSURE: 45 MIN 42 MIN

#### PRESSURE BREAKDOWN

				INCOSONE	DKLRK	DUMII		
	FIRST FLOW		ST FLOW INITIAL SHUT-IN			ND FLOW	FINAL	SHUT-IN
PT	MIN	PRESSURE	MIH	PRESSURE	MIH	PRESSURE	MIN	PRESSURE
1	0	45	0	64	0	114	0	117
2	5	45	3	220	5	114	3	224
3	10	45	6	257	10	114	6	262
4	15	47	9	278	15	114	9	279
5	20	53	12	294	20	114	12	291
6	25	61	15	302	25	116	15	301
7	30	64	18	306	30	117	18	305
8			21	311			21	309
9			24	315			24	312
10			27	318			27	315
11							30	318
12							33	319
13							36	320
14							39	321
15							42	322
16			4					, lb
17								

