15-065-22770 31-7s-24w

WELL NAME: Cummings #2
OPERATOR: H & H Investments
LOCATION: Sec 31 Twp 7S Rge 24W
Graham County Kansas
DATE: 04/28/96

TRILOBITE TESTING L.L.C.

OPERATOR : H & H Investments — DATE 04/27/96
WELL NAME: Cummings #2 — KB 2453.00 ft — TICKET NO: 9344 — DST #1
LOCATION : 31-7S-24W, Graham Cty KS — GR 2448.00 ft — FORMATION: LKC "H"
INTERVAL : 3840.00 To 3875.00 ft — TD 3875.00 ft — TEST TYPE: CONVENTIONAL

RECORDER DATA

	Mins		Field	1	2	3	4
PF	30	Rec.	24174	24174	13308		
SI	45	Range(Psi)	3050.0	3050.0	0.0	0.0	0.0
SF	30	Clock(hrs)	AK-1	AK-1	AK-1		
FS	45	Depth(ft)	3843.0	3843.0	3870.0	0.0	0.0

TIME DATA----------
PF Fr. 1904 to 1934 hr
IS Fr. 1934 to 2019 hr
SF Fr. 2019 to 2049 hr
FS Fr. 2049 to 2134 hr

	Field	1	2	3	4
A. Init Hydro	1911.0	1899.0	0.0	0.0	0.0
B. First Flow	44.0	46.0	0.0	0.0	0.0
B1. Final Flow	127.0	136.0	0.0	0.0	0.0
C. In Shut-in	568.0	568.0	0.0	0.0	0.0
D. Init Flow	97.0	95.0	0.0	0.0	0.0
E. Final Flow	112.0	113.0	0.0	0.0	0.0
F. Fl Shut-in	568.0	562.0	0.0	0.0	0.0
G. Final Hydro	1903.0	1897.0	0.0	0.0	0.0
Inside/Outside	I	I	O		

T STARTED 1742 hr
T ON BOTM 1902 hr
T OPEN 1904 hr
T PULLED 2134 hr
T OUT 2310 hr

RECOVERY
Tot Fluid 300.00 ft of 0.00 ft in DC and 300.00 ft in DP
1400.00 ft of Gas in pipe
40.00 ft of Gassy mud cut oil - 30% gas, 65% oil, 5% mud
80.00 ft of Gassy muddy oil - 30% gas, 50% oil, 20% mud
60.00 ft of Gassy muddy oil - 60% gas, 30% oil, 10% mud
120.00 ft of Gassy mud & water cut oil - 50% gas, 40% oil, 5% water, 5% mud

TOOL DATA----------

Tool Wt.	0.00 lbs
Wt Set On Packer	20000.00 lbs
Wt Pulled Loose	46000.00 lbs
Initial Str Wt	42000.00 lbs
Unseated Str Wt	44000.00 lbs
Bot Choke	0.75 in
Hole Size	7.88 in
D Col. ID	2.25 in
D. Pipe ID	3.80 in
D.C. Length	0.00 ft
D.P. Length	3850.00 ft

SALINITY 0.00 P.P.M. A.P.I. Gravity 42.00

MUD DATA----------

Mud Type	Chemical
Weight	9.30 lb/c
Vis.	44.00 S/L
W.L.	9.40 in3
F.C.	0.00 in
Mud Drop	
Amt. of fill	0.00 ft
Btm. H. Temp.	107.00 F
Hole Condition	
% Porosity	0.00
Packer Size	6.75 in
No. of Packers	2
Cushion Amt.	0.00
Cushion Type	
Reversed Out	
Tool Chased	
Tester	Paul Simpson
Co. Rep.	Ken Vehige
Contr.	White & Ellis
Rig #	9
Unit #	
Pump T.	

BLOW DESCRIPTION
Initial Flow -
.5" blow building to bottom of bucket in 7 min

Initial Shutin -
Blow built to 2.5"

Final Flow -
1" blow building to bottom of bucket in 5 min

Final Shutin -
Blow built to 7"

SAMPLES:
SENT TO:

Test Successful: Y

CALCULATED RECOVERY ANALYSIS - DRILL PIPE

DST # 1 TICKE 9344

SAMPL #	TOTAL FEET	GAS %	GAS FEET	OIL %	OIL FEET		WATE FEET	MUD %	MUD FEET
1	40	30	12	65	26		0	5	2
2	80	30	24	50	40		0	20	16
3	60	60	36	30	18		0	10	6
4	120	50	60	40	48	5	6	5	6
5			0		0		0		0
6			0		0		0		0
TOTAL	300	44	132	44	132	2	6	10	30

			HRS O	BBL/DAY
BBL OIL=	1.877	*	1	45
BBL WATER=	0.0853	*		2.05
BBL MUD=	0.4266			
BBL GAS	1.877			

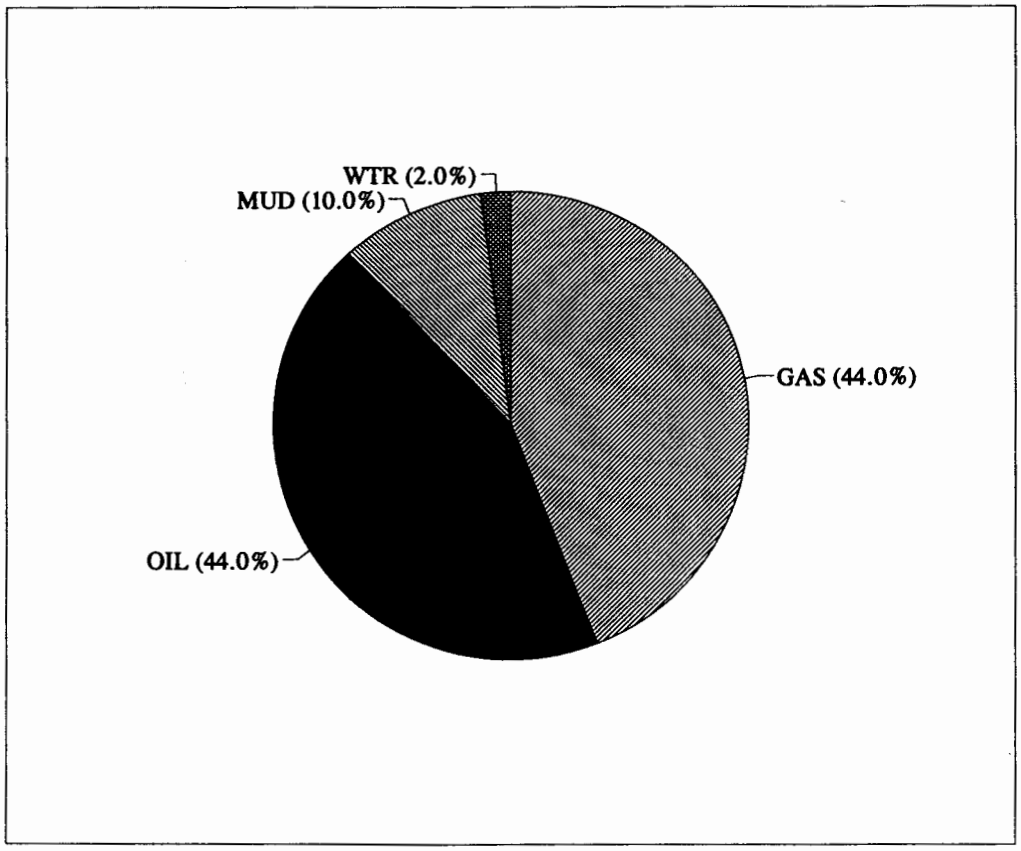
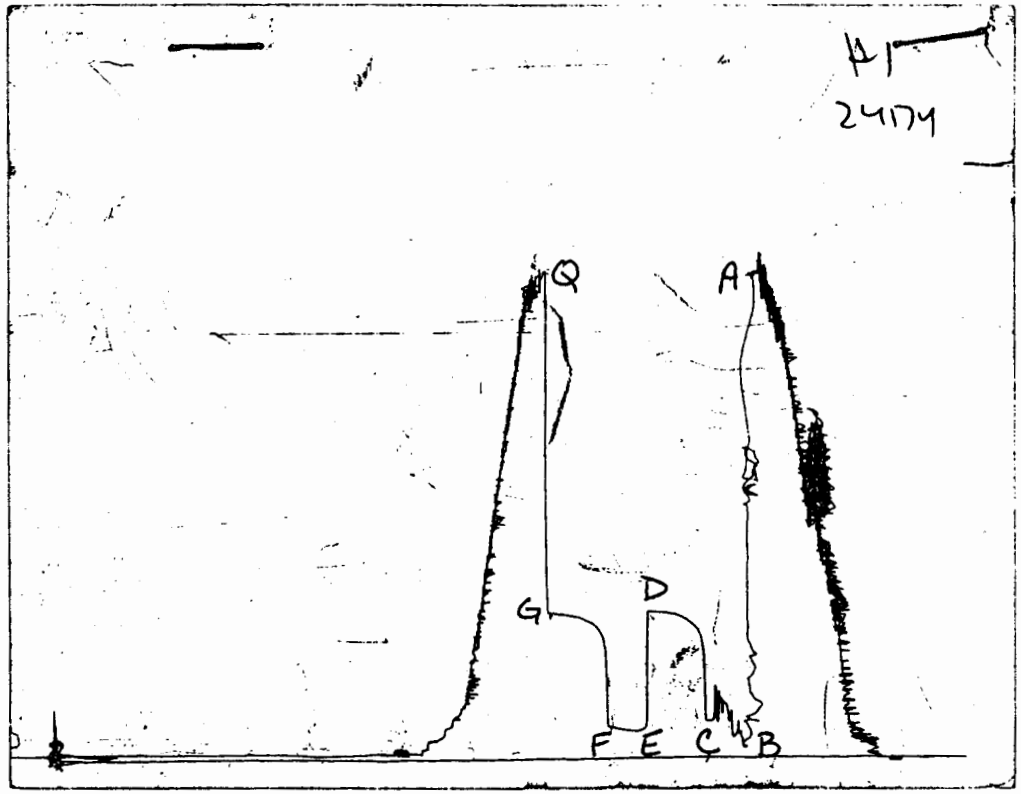


CHART PAGE



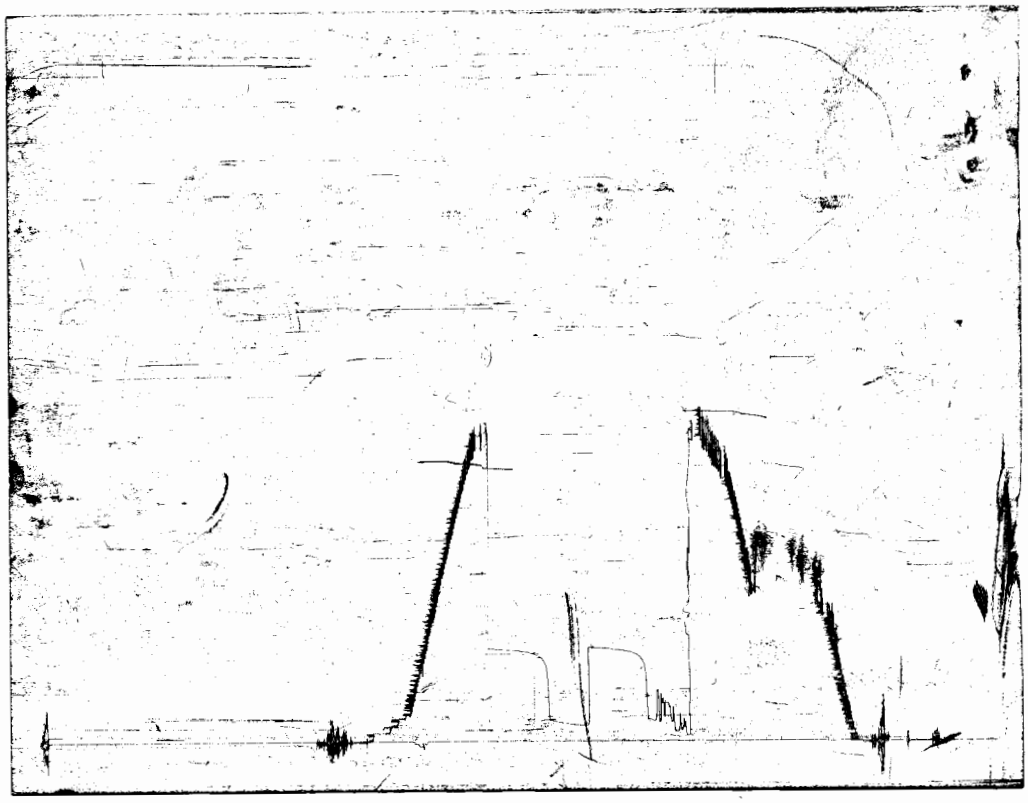
This is a photocopy of the actual AK-1 recorder chart

Well name Cummings

DST # 1

Recorder # 24174

1				
2	A		1899	
3	B		46	
4	C		1316	
5	D		568	
6	E		95	
7	F		113	
8	G		562	
9	H		1897	
10				
11				
12				



TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Test Ticket

Nº 9344

Well Name & No. Cummings #2 Test No. 1 Date 4-27-96

Company H & H Investments Zone Tested LKC 'H'

Address 3115 Hall Hays Ks 67601 Elevation 2453 KB 2448 GL

Co. Rep / Geo. Ken Vehige Cont. White & Ellis #9 Est. Ft. of Pay ___ Por. ___ %

Location: Sec. 31 Twp. 7s Rge. 24w Co. Graham State Ks

No. of Copies 3 Distribution Sheet (Y, N) ___ Turnkey (Y, N) ___ Evaluation (Y, N) ___

Interval Tested 3840 - 3875 Initial Str Wt./Lbs. 42,000 Unseated Str Wt./Lbs. 44,000

Anchor Length 35 Wt. Set Lbs. 20,000 Wt. Pulled Loose/Lbs. 46,000

Top Packer Depth 3835 Hole Size — 7 7/8" ___ Rubber Size — 6 3/4" ___

Bottom Packer Depth 3840 Wt. Pipe I.D. — 2.7 Ft. Run ___

Total Depth 3875 Drill Collar — 2.25 Ft. Run ___

Mud Wt. 9.3 LCM ___ Vis. 44 WL 9.4 Drill Pipe Size 4½ XH Ft. Run 3850 62

Blow Description ½" blow building to bottom of bucket in 7 minutes
ISI - blow built to 2½"
FF - 1" blow building to bottom of bucket in 5 minutes
FSI - blow built to 7"

Recovery — Total Feet 300 Ft. in DC ___ Ft. in WP ___ Ft. in DP 300

Rec. 40	Feet Of	gassy muddy oil	30	%gas	65	%oil		%water	5	%mud
Rec. 80	Feet Of	gassy muddy oil	30	%gas	50	%oil		%water	20	%mud
Rec. 60	Feet Of	gassy muddy oil	60	%gas	30	%oil		%water	10	%mud
Rec. 120	Feet Of	gassy mud cut oil	50	%gas	40	%oil	5	%water	5	%mud
Rec. 1400	Feet Of	gas in pipe		%gas		%oil		%water		%mud

BHT 107 °F Gravity 42 °API D@ 60 °F Corrected Gravity 42 °API

RW ___ @ ___ °F Chlorides ___ ppm Recovery Chlorides ___ ppm System

(A) Initial Hydrostatic Mud	1911 PSI	Recorder No.	24174	T-Started	1742
(B) First Initial Flow Pressure	44 PSI	@ (depth)	3843	T-Open	1904
(C) First Final Flow Pressure	127 PSI	Recorder No.	13308	T-Pulled	2134
(D) Initial Shut-in Pressure	568 PSI	@ (depth)	3870	T-Out	2310
(E) Second Initial Flow Pressure	97 PSI	Recorder No.	___		
(F) Second Final Flow Pressure	112 PSI	@ (depth)	___		
(G) Final Shut-in Pressure	568 PSI	Initial Opening	30	Test	600
(H) Final Hydrostatic Mud	1903 PSI	Initial Shut-in	45	Jars	___
		Final Flow	30	Safety Joint	___
		Final Shut-in	45	Straddle	___
		___		Circ. Sub	___
		___		Sampler	___
				Extra Packer	___
				Elect. Rec.	___
				Other	___
				TOTAL PRICE $	600

Approved By [signature]

Our Representative Paul Simpson

TRILOBITE TESTING L.L.C.

OPERATOR : H & H Investments — DATE 04/28/96
WELL NAME: Cummings #2 — KB 2453.00 ft — TICKET NO: 9345 — DST #2
LOCATION : 31-7S-24W, Graham Cty KS — GR 2448.00 ft — FORMATION: LKC "K"
INTERVAL : 3908.00 To 3929.00 ft — TD 3929.00 ft — TEST TYPE: CONVENTIONAL

RECORDER DATA

Mins		Field	1	2	3	4
PF 30	Rec.	24174	24174	13308		
SI 40	Range(Psi)	3050.0	3050.0	0.0	0.0	0.0
SF 0	Clock(hrs)	AK-1	AK-1	AK-1		
FS 0	Depth(ft)	3932.0	3932.0	3927.0	0.0	0.0

TIME DATA----------
PF Fr. 1040 to 1110 hr
IS Fr. 1110 to 1150 hr
SF Fr. to hr
FS Fr. to hr

	Field	1	2	3	4
A. Init Hydro	2011.0	2007.0	0.0	0.0	0.0
B. First Flow	22.0	15.0	0.0	0.0	0.0
B1. Final Flow	22.0	17.0	0.0	0.0	0.0
C. In Shut-in	30.0	31.0	0.0	0.0	0.0
D. Init Flow	0.0	0.0	0.0	0.0	0.0
E. Final Flow	0.0	0.0	0.0	0.0	0.0
F. Fl Shut-in	0.0	0.0	0.0	0.0	0.0
G. Final Hydro	1996.0	1979.0	0.0	0.0	0.0
Inside/Outside		O	O	I	

T STARTED 0945 hr
T ON BOTM 1038 hr
T OPEN 1040 hr
T PULLED 1150 hr
T OUT 1310 hr

RECOVERY
Tot Fluid 1.00 ft of 0.00 ft in DC and 1.00 ft in DP
1.00 ft of Oil specked mud

TOOL DATA----------

Tool Wt.	0.00 lbs
Wt Set On Packer	20000.00 lbs
Wt Pulled Loose	0.00 lbs
Initial Str Wt	42000.00 lbs
Unseated Str Wt	0.00 lbs
Bot Choke	0.75 in
Hole Size	7.88 in
D Col. ID	2.25 in
D. Pipe ID	3.80 in
D.C. Length	0.00 ft
D.P. Length	3912.00 ft

SALINITY 0.00 P.P.M. A.P.I. Gravity 0.00

BLOW DESCRIPTION
Initial Flow -
Very weak surface blow died in 12 min

Final Flow -
None taken

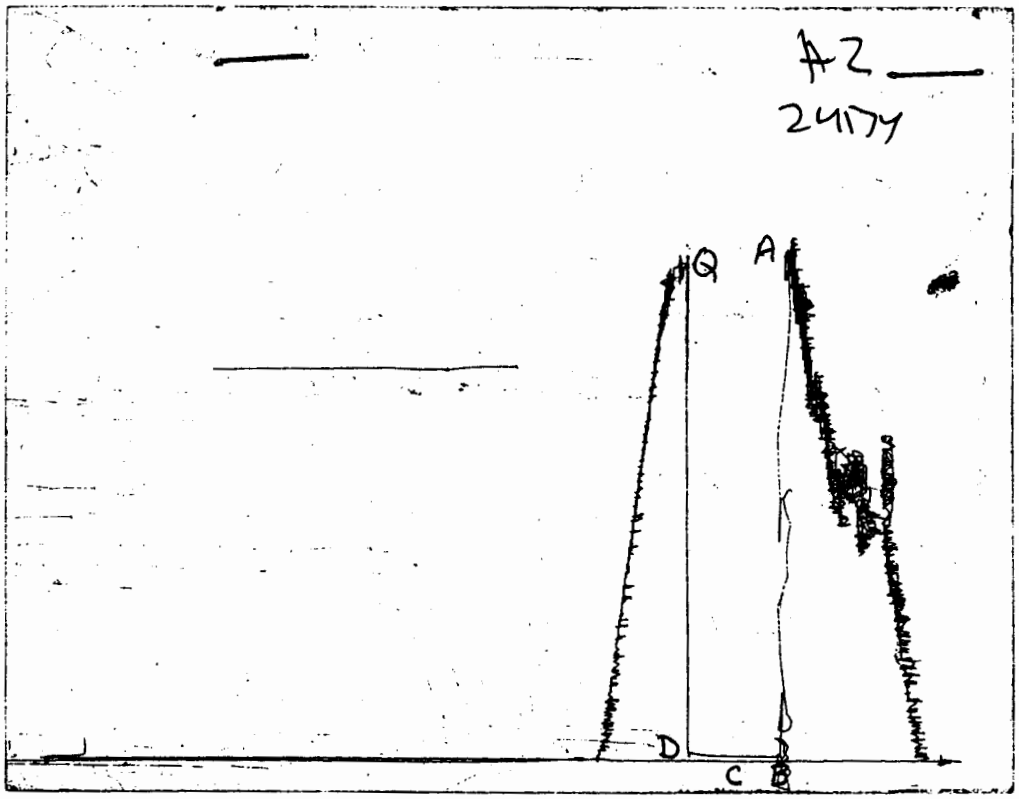
MUD DATA----------

Mud Type	Chemical
Weight	9.40 lb/c
Vis.	43.00 S/L
W.L.	9.60 in3
F.C.	0.00 in
Mud Drop	
Amt. of fill	0.00 ft
Btm. H. Temp.	107.00 F
Hole Condition	
% Porosity	0.00
Packer Size	6.75 in
No. of Packers	2
Cushion Amt.	0.00
Cushion Type	
Reversed Out	
Tool Chased	
Tester	Paul Simpson
Co. Rep.	Ken Vehige
Contr.	White & Ellis
Rig #	9
Unit #	
Pump T.	

SAMPLES:
SENT TO:

Test Successful: Y

CHART PAGE



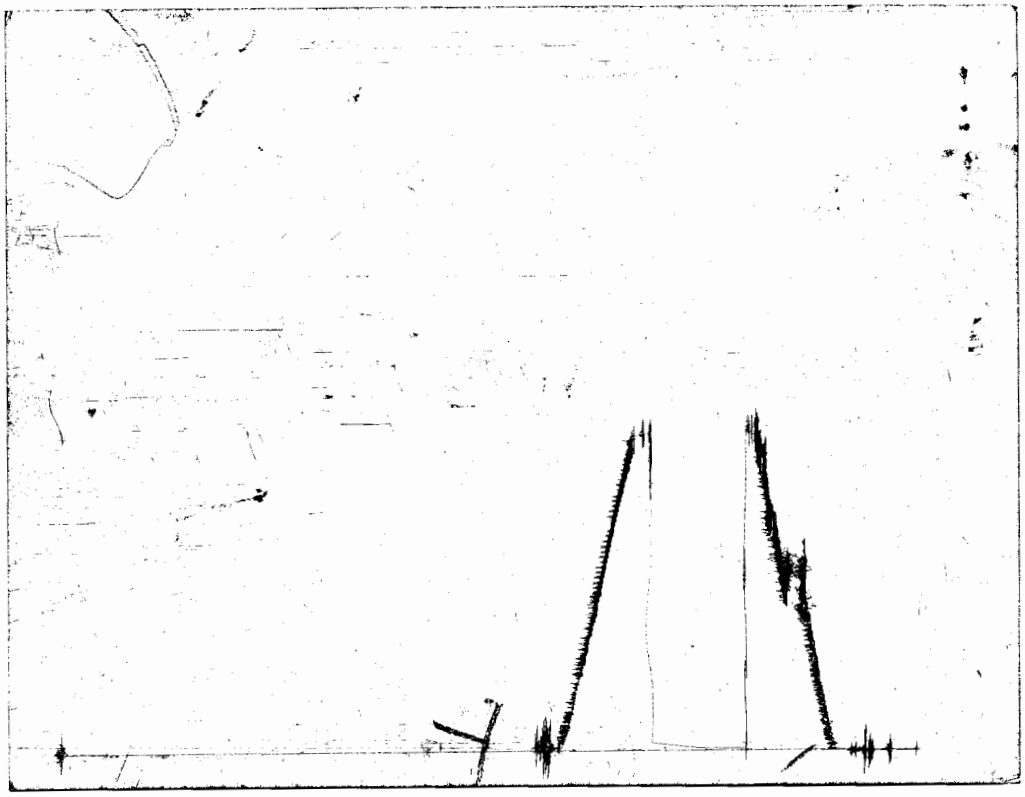
This is a photocopy of the actual AK-1 recorder chart

Well name Cummings 2

DST # 2

Recorder # 2474

A		2007	
B		15	
C		17	
D		31	
E			
F			
G			
H		1979	



TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Test Ticket

Nº 9345

Well Name & No. Cummings #2 Test No. 2 Date 4-28-96

Company H + H Investments Zone Tested LKC K

Address _____ Elevation 2453 KB 2448 GL

Co. Rep / Geo. Ken Vehige Cont. White & Ellis #9 Est. Ft. of Pay ____ Por. ____ %

Location: Sec. 31 Twp. 9s Rge. 24w Co. Graham State Ks

No. of Copies ____ Distribution Sheet (Y, N) _____ Turnkey (Y, N) _____ Evaluation (Y, N) _____

Interval Tested 3908-3929 Initial Str Wt./Lbs. 42,000 Unseated Str Wt./Lbs. _____

Anchor Length 21 Wt. Set Lbs. 20,000 Wt. Pulled Loose/Lbs. _____

Top Packer Depth 3903 Hole Size — 7 7/8" _____ Rubber Size — 6 3/4" _____

Bottom Packer Depth 3908 Wt. Pipe I.D. — 2.7 Ft. Run _____

Total Depth 3929 Drill Collar — 2.25 Ft. Run _____

Mud Wt. 9.4 LCM ____ Vis. 43 WL 9.6 Drill Pipe Size 4½XH Ft. Run 3912

Blow Description 1st open weak surface blow died in 12 minutes

2nd open no blow

Recovery — Total Feet 1 Ft. in DC _____ Ft. in WP _____ Ft. in DP _____

Rec. 1 Feet Of oil spotted mud %gas %oil %water %mud

Rec. _____ Feet Of _____ %gas %oil %water %mud

Rec. _____ Feet Of _____ %gas %oil %water %mud

Rec. _____ Feet Of _____ %gas %oil %water %mud

Rec. _____ Feet Of _____ %gas %oil %water %mud

BHT 107 °F Gravity _____ °API D@ _____ °F Corrected Gravity _____ °API

RW _____ @ _____ °F Chlorides _____ ppm Recovery Chlorides _____ ppm System

(A) Initial Hydrostatic Mud	2011 PSI	Recorder No.	24174	T-Started	0945
(B) First Initial Flow Pressure	22 PSI	@ (depth)	3932	T-Open	10:40
(C) First Final Flow Pressure	22 PSI	Recorder No.	13308	T-Pulled	11:50
(D) Initial Shut-in Pressure	30 PSI	@ (depth)	3924	T-Out	13:10
(E) Second Initial Flow Pressure	_____ PSI	Recorder No.	_____		
(F) Second Final Flow Pressure	_____ PSI	@ (depth)	_____		
(G) Final Shut-in Pressure	_____ PSI	Initial Opening	30	Test	600
(H) Final Hydrostatic Mud	1996 PSI	Initial Shut-in	40	Jars	_____
		Final Flow	_____	Safety Joint	_____
		Final Shut-in	—	Straddle	_____
			_____	Circ. Sub	_____
			_____	Sampler	_____
				Extra Packer	_____
				Elect. Rec.	_____
				Other	_____
				TOTAL PRICE $	1000

Approved By Ken Vehige

Our Representative Paul Simpson