15-071-20705 14-20s-42w

TRILOBITE TESTING L.L.C.

OPERATOR : Western Operating Co. DATE 5-13-99
WELL NAME: Norris #14-2 KB 3729.00 ft TICKET NO: 11915 DST #1
LOCATION : 14-20S-42W Greeley KS. GR 3742.00 ft FORMATION: Morrow
INTERVAL : 5030.00 To 5155.00 ft TD 5155.00 ft TEST TYPE: CONVENTIONAL

RECORDER DATA

Mins		Field	1	2	3	4
PF 15	Rec.	13309	13309	3024		
SI 30	Range(Psi)	4700.0	4700.0	4995.0	0.0	0.0
SF 45	Clock(hrs)	12 HR	12	ALP		
FS 90	Depth(ft)	5150.0	5150.0	5035.0	0.0	0.0

TIME DATA----------
PF Fr. 1537 to 1552 hr
IS Fr. 1552 to 1622 hr
SF Fr. 1622 to 1707 hr
FS Fr. 1707 to 1842 hr

	Field	1	2	3	4
A. Init Hydro	2664.0	2690.0	0.0	0.0	0.0
B. First Flow	58.0	127.0	0.0	0.0	0.0
B1. Final Flow	58.0	106.0	0.0	0.0	0.0
C. In Shut-in	94.0	134.0	0.0	0.0	0.0
D. Init Flow	58.0	114.0	0.0	0.0	0.0
E. Final Flow	58.0	91.0	0.0	0.0	0.0
F. Fl Shut-in	82.0	91.0	0.0	0.0	0.0
G. Final Hydro	2523.0	2521.0	0.0	0.0	0.0
Inside/Outside	O	O	I		

T STARTED 1245 hr
T ON BOTM 1535 hr
T OPEN 1537 hr
T PULLED 1842 hr
T OUT 2045 hr

RECOVERY
Tot Fluid 20.00 ft of 20.00 ft in DC and 0.00 ft in DP
20.00 ft of Drilling mud
0.00 ft of
0.00 ft of
0.00 ft of
0.00 ft of
0.00 ft of
0.00 ft of
SALINITY 0.00 P.P.M. A.P.I. Gravity 0.00

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

Tool Wt.	2000.00 lbs
Wt Set On Packer	30000.00 lbs
Wt Pulled Loose	85000.00 lbs
Initial Str Wt	70000.00 lbs
Unseated Str Wt	70000.00 lbs
Bot Choke	0.75 in
Hole Size	8.88 in
D Col. ID	2.25 in
D. Pipe ID	3.80 in
D.C. Length	559.00 ft
D.P. Length	4473.00 ft

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

Mud Type	Chemical
Weight	9.20 lb/cf
Vis.	50.00 S/L
W.L.	8.80 in3
F.C.	0.00 in
Mud Drop	N

BLOW DESCRIPTION
Initial Flow:
Weak 1/2" blow steady throughout
Final Flow:
Weak 1/2" blow died in 45 mins.

Amt. of fill	0.00 ft
Btm. H. Temp.	138.00 F
Hole Condition	Good
% Porosity	0.00
Packer Size	6.75 in
No. of Packers	2
Cushion Amt.	0.00
Cushion Type	
Reversed Out	N
Tool Chased	N
Tester	Rod Steinbrink
Co. Rep.	Bill
Contr.	Murfin
Rig #	25
Unit #	
Pump T.	

SAMPLES:
SENT TO:

Test Successful: Y

*** TOOL DIAGRAM *** CONVENTIONAL

ELL NAME: Norris #14-2

OCATION : 14-20S-42W Greeley KS.

ICKET No. 11915 D.S.T. No. 1 DATE 5-13-99

)TAL TOOL TO BOTTOM OF TOP PACKERS 30

JTERVAL TOOL 32

)TTOM PACKERS AND ANCHOR .....

)TAL TOOL 62

ILL COLLAR ANCHOR IN INTERVAL .....

C. ANCHOR STND.Stands Single Total

P. ANCHOR STND.Stands 1 Single Total 93

)TAL ASSEMBLY 155

C. ABOVE TOOLS.Stands6 Single Total 559

P. ABOVE TOOLS.Stands47 Single 2 Total 4473

TAL DRILL COLLARS DRILL PIPE & TOOLS .. 5187

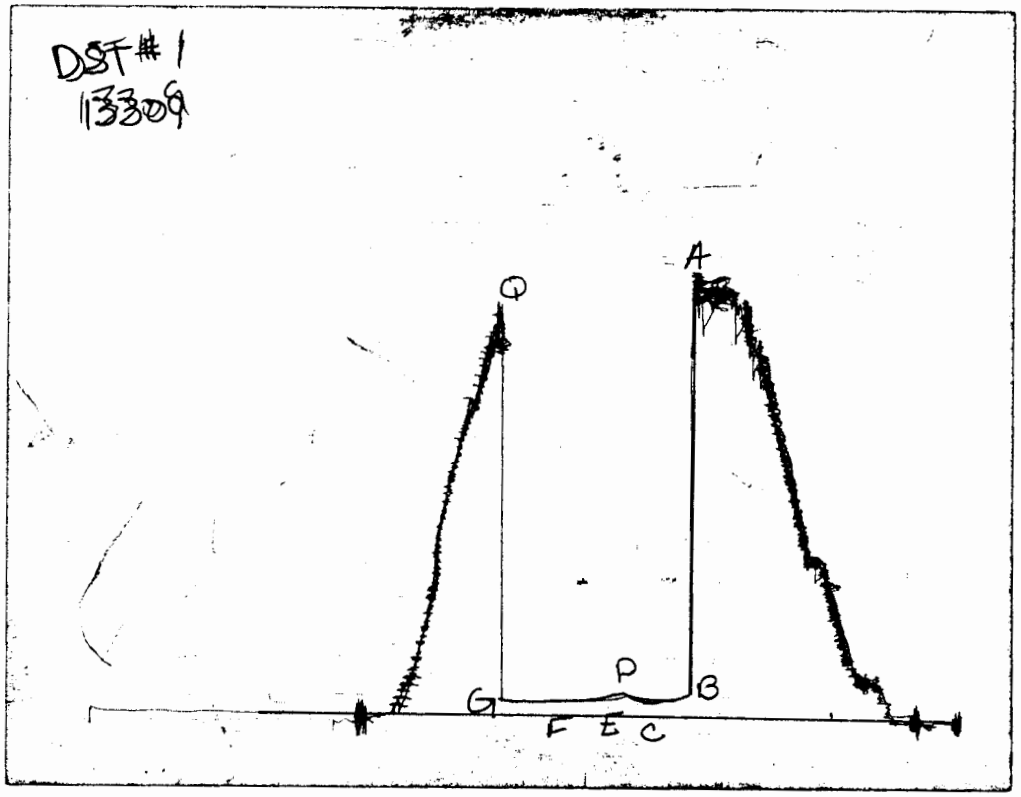
TAL DEPTH 5155

TAL DRILL PIPE ABOVE K.B. 32

MARKS:

P.O. SUB 1' Above 90' DC	4910
C.O. SUB 1'	5000
S.I. TOOL 5'	5006
3' Sampler	5009
HMV 5'	5014
JARS 5'	5019
SAFETY JOINT 2'	5021
PACKER 4'	5025
PACKER 5'	5030
DEPTH	
STUBB 1'	5031
ANCHOR	
3' Perf	5034
ALP Rec. @	5035
1' c/o sub	5035
93' DP	5128
1' c/o sub	5129
T.C.	
DEPTH	
20' Perf.	5149
AK-1 Rec. @	5150
BULLNOSE 5'	
T.D.	5155

CHART PAGE



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

TRILOBITE TESTING L.L.C.

P.O. Box 362 - Hays, Kansas 67601

FLUID SAMPLER DATA

Ticket No. 11915 Date 5-13-99

Company Name Western Operating Co. Cont. Murfin #25

Lease Norris #14-2 Test No. #1 Morrow

County Greeley KS Sec. 14 Twp. 20S Rng. 42W

SAMPLER RECOVERY

Gas _____ ML

Oil _____ ML

Mud 4,000 ML

Water _____ ML

Other _____ ML

Pressure 0 PSI

Total 4,000 ML

PIT MUD ANALYSIS

Chlorides 3,500 ppm.

Resistivity _____ ohms @ _____ F

Viscosity 50

Mud Weight 9.2

Filtrate 8.8

Other LCM 3#/bbl.

SAMPLER ANALYSIS

Resistivity _____ ohms @ _____ F

Chlorides _____ ppm.

Gravity _____ corrected @ 60 F

PIPE RECOVERY

TOP

Resistivity _____ ohms @ _____ F

Chlorides _____ ppm.

MIDDLE

Resistivity _____ ohms @ _____ F

Chlorides _____ ppm.

BOTTOM

Resistivity _____ ohms @ _____ F

Chlorides 3,500 ppm.

TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601 № 11915

Test Ticket

Well Name & No. Norris #14-2 Test No. 1 Date 5-13-99

Company Western Operating Company Zone Tested Morrow

Address 518 17th St. Ste 1680 Denver, CO. 80202 Elevation 3742 KB 3729 GL

Co. Rep / Geo. Bill Eucker Cont. Murfin #25 Est. Ft. of Pay ___ Por. ___ %

Location: Sec. 14 Twp. 20S Rge. 42W Co. Greeley State KS.

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

Interval Tested 5030 - 5155 Initial Str Wt./Lbs. 70,000 Unseated Str Wt./Lbs. 70,000

Anchor Length 125' Wt. Set Lbs. 30,000 Wt. Pulled Loose/Lbs. 85,000

Top Packer Depth 5025 Tool Weight 2,000

Bottom Packer Depth 5030 Hole Size — 7 7/8" ___ Rubber Size — 6 3/4" ___

Total Depth 5155 Wt. Pipe Run — Drill Collar Run 559' (6)

Mud Wt. 9.2 LCM 3# Vis. 50 WL 8.8 Drill Pipe Size 4½" XH Ft. Run 4473' (47)

Blow Description IF: Weak ½" blow steady throughout

FF: Weak ½" blow died @ 45 mins

Recovery — Total Feet 20' GIP — Ft. in DC 20' Ft. in DP —

Rec. ___	Feet Of ___	%gas	%oil	%water	%mud
Rec. ___	Feet Of ___	%gas	%oil	%water	%mud
Rec. 20'	Feet Of Drlg Mud	%gas	%oil	%water	%mud
Rec. ___	Feet Of ___	%gas	%oil	%water	%mud
Rec. ___	Feet Of ___	%gas	%oil	%water	%mud

BHT 138° °F Gravity ___ °API D@ ___ °F Corrected Gravity ___ °API

RW ___ @ ___ °F Chlorides ___ ppm Recovery Chlorides 3500 ppm System

	AK-1	Alpine					
(A) Initial Hydrostatic Mud	2664		PSI	Recorder No.	13309	T-On Location	1100 (CDT)
(B) First Initial Flow Pressure	58		PSI	(depth)	5150	T-Started	1245
(C) First Final Flow Pressure	58		PSI	Recorder No.	3024	T-Open	1537
(D) Initial Shut-In Pressure	94		PSI	(depth)	5035	T-Pulled	1842
(E) Second Initial Flow Pressure	58		PSI	Recorder No.	—	T-Out	2045
(F) Second Final Flow Pressure	58		PSI	(depth)	—	T-Off Location	2145
(G) Final Shut-in Pressure	82		PSI	Initial Opening	15	Test	800
(Q) Final Hydrostatic Mud	2523		PSI	Initial Shut-in	30	Jars	X 200
				Final Flow	45	Safety Joint	X 50
				Final Shut-in	90	Straddle	___
						Circ. Sub	X N/C
						Sampler	X 200
						Extra Packer	___
						Elec. Rec.	X N/C
						Mileage	___
						Other	___
						TOTAL PRICE $	1250

TRILOBITE TESTING L.L.C. SHALL NOT BE LIABLE FOR DAMAGE OF ANY KIND OF THE PROPERTY OR PERSONNEL OF THE ONE FOR WHOM A TEST IS MADE, OR 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.

Approved By ___

Our Representative Rod Steinbrink