

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

135-24016 0000

API NO. 15-

County Ness

200' N C - S/2 - NE Sec. 14 Twp. 16S Rge. 26W X

3500 Feet from S/N (circle one) Line of Section

1320 Feet from E/W (circle one) Line of Section

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

Lease Name Evel "E" Well # 2

Field Name Arnold SW

Producing Formation Mississippian

Elevation: Ground 2567 KB 2575

Total Depth 4524 PBTD

Amount of Surface Pipe Set and Cemented at 230.39 Feet

Multiple Stage Cementing Collar Used? X Yes No

If yes, show depth set 1958 Feet

If Alternate II completion, cement circulated from 1958

feet depth to Surface w/ 225 sx cmt.

Drilling Fluid Management Plan AH-2, 7-27-98 v.c.
(Data must be collected from the Reserve Pit)

Chloride content 16,000 ppm Fluid volume 1,500 bbls

Dewatering method used Evaporation

Location of fluid disposal if hauled offsite:

Operator Name

Lease Name License No.

Quarter Sec. Twp. S Rng. E/W

County Docket No.

Operator: License # 4689

Name: THOMAS C. LUTZ

Address P.O. Drawer 3067

City/State/Zip Lawrence, Kansas 66046

Purchaser:

Operator Contact Person: Thomas C. Lutz

Phone (913) 832-1119

Contractor: Name: Discovery Drilling, Inc.

License: 31548

Wellsite Geologist: Ron Nelson

Designate Type of Completion
 New Well Re-Entry Workover

Oil SWD SIOW Temp. Abd.
 Gas ENHR SIGW
 Dry Other (Core, MSW, 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/SWD
 Plug Back PBTD
 Commingled Docket No.
 Dual Completion Docket No.
 Other (SWD or Inj?) Docket No.

7/5/97 7/12/97 7/13/97

Spud Date Date Reached TD Completion Date

INSTRUCTIONS: An original and two copies of this form shall be filed with the Kansas Corporation Commission, 200 Colorado Derby Building, 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 [Signature]

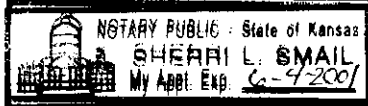
Title OWNER Date 12/1/97

Subscribed and sworn to before me this 1 day of Dec, 19 97.

Notary Public [Signature]

Date Commission Expires 6-4-2001

K.C.C. OFFICE USE ONLY
F Letter of Confidentiality Attached
C Wireline Log Received
C Geologist Report Received
Distribution
 KCC SWD/Rep NGPA
 KGS Plug Other
(Specify)



Operator Name THOMAS C. LUT Lease Name Evelyn E Well # 2
 Sec. 14 Twp. 16S Rge. 26W East West
 County Ness

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
 (Attach Additional Sheets.)
 Samples Sent to Geological Survey Yes No
 Cores Taken Yes No
 Electric Log Run Yes No
 (Submit Copy.)

Log Formation (Top), Depth and Datum Sample
 Name Top Datum

List All E.Logs Run:

*GAMMA RAY, Radiation
 Guard Log.*

CASING RECORD <input checked="" type="checkbox"/> New <input type="checkbox"/> 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 Pipe	12 1/4	8 5/8	20	230.39	60/40Poz	165	2%Gel&3%CC
Production St.	7 7/8	5 1/2	14	4504	60/40Poz	150	10%Salt
				1958	Midcon II	225	

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	4393-98'	
	4413-16'	

TUBING RECORD		Size	Set At	Packer At	Liner Run	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Date of First, Resumed Production, SWD or Inj.				Producing Method <input type="checkbox"/> Flowing <input 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

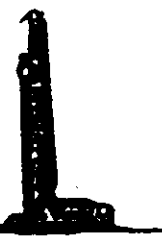
Disposition of Gas:
 Vented Sold Used on Lease
 (if vented, submit ACO-18.)

METHOD OF COMPLETION
 Open Hole Perf. Dually Comp. Commingled
 Other (Specify) _____

Production Interval
4393-98'
4413-16'

DISCOVERY DRILLING

P. O. BOX 763 HAYS, KANSAS 67601



Contractor Discovery Drilling, Inc Rig No. 1 Lease Evel "E" Well No. 2
 Company Thomas C. Lutz State Kansas County Ness Field Arnold SW
 API # 135-24016 Elevation 2575 K.B. R.T.D. 4524 Spot 200' N C 5/2 NE Section 14 Township 16S RN 26W
 Tool Joint Conn. XH Drill Pipe Size 4 1/2 Drill Collars No. 17 O.D. 6 1/8" I.D. 2 3/8" Pump No. 1 Wilson "600"
 Tool Pusher Alm Driller Cliff Mayfield Driller Dave Breiling Driller Bill Skeen

15-135-24016

(913) 623-2920

Cat Barnbeck Construction

Tru Rainbow & Company

Water-Hauling None

Testing Trilobite

Cement Surface Allied Cementing

Loggers ELT L.T.D. 4523

Casing Crew Murray Casing

Fuel Schreibers, Inc.

Mud Company Andy's Type Drispac

Surface Mud Used lime

Mud Up @ 3600'

1' Drig. Time @ 3500' 10' Wet & Dry @ 3500'

Mud Cost - \$ 4597.75 + FRT

Sur Pipe - Co. Trucks Other

No Service Mud - Yes No

Water Well No

Frac Tank Discovery Drilling, Inc.

Motel None

Back Hoe None

Welder D&S Machine

Reserve Pit Chlorides 16,000 PPM

Pit Liner 1

Discovery Drilling, Inc Pumped Water

ORIGINAL

Run No.	Size	Make	Type	Jet Size	Serial	Depth		Feet	Hours	Feet Per Hour	Weight 1000 Lbs.	RPM	Vert. Dev.	Pump Press.	Formation Tops
						From	To								
1	12 1/4	WM	Oil F	3/14	AZ8223	0	232	232	2 1/4	103	A11/20	120	10	600	Dakota Sand
2	7 7/8	HTC	GTI RL	3/13	D4145	232	4524	4292	96 1/2	44	20/40	70/90	10	900	Cedar Hills Sand
(4524 - 98.75 HR = 45.81 FPH)															
Anhydrite (1980-2014)															
Topeka															
Heebner															
Toronto															
LKC-BKC															
Marmaton															
Arbuckle															
Geo. Name - <u>Ron Nelson</u>															
Phone - <u>(913) 628-3449</u>															
Dst #1 <u>(4326-4407) (21)</u>															
Dst #2 <u>(4502-4515) (13)</u>															
Dst #3 <u>(452-4524) (22)</u>															
Dst #4															
Dst #5															
Dst #6															
Dst #7															
Dst #8															
Dst #9															
Dst #10															
Dst #11															
Dst #12															

Plugging Report
 State Plugger - Ron 124 Its New 14"
5 1/2" Casing Tally
 sks @ 4497' Set @ 4504'
 10 sks @ Moose Hole
 15 sks @ Rat Hole
 150 sks @ Bottom Stage Col 40 Poz
 225 sks @ Top Stage mud-Con II
 sks @
 sks @
 sks @
 sks @
 375 sks (Total)
 Plug Down @ 430 A.M. 7/13/97
 Rig Release @ A.M.
 Job By - HOWDO

Surface Pipe
 Ran 5 jts. new 20 # 8-5/8" casing
 Talley 220.39 set @ 230.39 K.B.
 Cemented w/ 165 sks. 60/40 Poz 20/60 & 30/10 C.C.
 Cement Did Circulate
 Plug Down @ 7:15 P.M.
 Spud @ 1:30 P.M.
 Drilled Plug @ 3:55 A.M.
 Job By Allied Cementing
 Name - Charles Walker Jr.
 Address - P.O. Box 117 Phone # - (913) 391-2408
 City Wyma, Kansas 67584
 Social Security # 511-34-9982
 Amount \$ 800.00
 Section 14 Township 16S Range 26W
 Pond Water Well Other
 FSL FEL Permit # 859017

Bottom Stage @ 3:30 AM 7/13/97
Top Stage (Mud Pipe)

Thomas C. Lutz

Production String Worksheet

581.16

628.94

619.92

777.84

843.34

848.98

254.48

4554.66

PS 2.00

SL 3.00

LI 7.00

4566.66

Total Pipe

- 67.38

Joints

4499.28

Set@

Joints Out # 1 (10.60)

61 (24.75)

ORIGINAL

126 (42.63)

Centralizers # 2 (4488)

4 (4427)

6 (4367)

8 (4306)

78 (2002)

Basket # 79 (2002)

DL Tool # 79 (1958)

Insert @ (4485')

Ran 123 Joints New 24# 5 1/2" Casing Tally 4492'
Set@ 4499'

Cement by Halliburton Bottom Stage w/ 150sks 60/40 Poz 2% Ge.
10% Salt 1/2% G.
1/4# FS/sk

Top Stage w/ 225 Mid-Con II 2% C.C.

375 FS/sk

DAILY DRILLING REPORT
NO. 43 BOX 800
 TULSA OK 74101

Sunday

CONTRACTOR <i>Disposal Drilling Inc</i>		DATE <i>7-13-97</i>
COMPANY <i>Thomas C. Lutz</i>	LEASE <i>East 1/2</i>	WELL NO. <i>1</i>
DISTRICT	COUNTY <i>Nowa</i>	STATE <i>Ks</i>
D. P. STRING NO.		SIZE

FROM	TO	FORMATION	ROTARY SPEED	WEIGHT ON BIT	PUMP PRES.	NAME	HRS.
ORIGINAL							
						DM <i>Bill Stoen</i>	<i>8</i>
						EM	<i>8</i>
						H <i>Carl Kimberlicht</i>	<i>8</i>
SLOPE TEST		ACCIDENT:— (GIVE NAME) <i>Time</i>				H	
@	FT.	<i>(5 1/2 Hrs (b, Time))</i>					
	DEG. OFF					DRLR <i>Bill Stoen</i>	<i>8</i>

BIT AND COREHEAD RECORD		MUD RECORD		TIME RECORD		DRILL STEM RECORD	
RUN NO.		WEIGHT		DRILLING		SIZE D. P.	
SIZE		VISC.		CORING		SIZE COLL.	
MAKE		WTR. LOSS-C.C.		OTHER		JTS. D. P.	FT.
SERIAL NO.		FILTER CAKE		REPAIRS		KELLY DOWN	FT.
DEPTH IN		PH.		TRIP		COLLARS	FT.
HOURS RUN		MTL. ADDED (REMARKS)				TOTAL	FT.

REMARKS: *11:00 to 1:45 1st stage 1:45 to 2:00 Open jacket blue 2:00 to 2:45 fine 2:45 to 3:30 cement 1st stage 3:30 to 4:30 cement 2nd stage 4:30 to 5:00 Turn Low*

FROM	TO	FORMATION	ROTARY SPEED	WEIGHT ON BIT	PUMP PRES.	NAME	HRS.
Crossed out section							
						DM	
						EM	
						H	
SLOPE TEST		ACCIDENT:— (GIVE NAME)				H	
@	FT.						
	DEG. OFF					DRLR	

BIT AND COREHEAD RECORD		MUD RECORD		TIME RECORD		DRILL STEM RECORD	
RUN NO.		WEIGHT		DRILLING		SIZE D. P.	
SIZE		VISC.		CORING		SIZE COLL.	
MAKE		WTR. LOSS-C.C.		OTHER		JTS. D. P.	FT.
SERIAL NO.		FILTER CAKE		REPAIRS		KELLY DOWN	FT.
DEPTH IN		PH.		TRIP		COLLARS	FT.
HOURS RUN		MTL. ADDED (REMARKS)				TOTAL	FT.

REMARKS:

FROM	TO	FORMATION	ROTARY SPEED	WEIGHT ON BIT	PUMP PRES.	NAME	HRS.
Crossed out section							
						DM	
						EM	
						H	
SLOPE TEST		ACCIDENT:— (GIVE NAME)				H	
@	FT.						
	DEG. OFF					DRLR	

BIT AND COREHEAD RECORD		MUD RECORD		TIME RECORD		DRILL STEM RECORD	
RUN NO.		WEIGHT		DRILLING		SIZE D. P.	
SIZE		VISC.		CORING		SIZE COLL.	
MAKE		WTR. LOSS-C.C.		OTHER		JTS. D. P.	FT.
SERIAL NO.		FILTER CAKE		REPAIRS		KELLY DOWN	FT.
DEPTH IN		PH.		TRIP		COLLARS	FT.
HOURS RUN		MTL. ADDED (REMARKS)				TOTAL	FT.

REMARKS:

ORIGINAL

Friday

DAILY DRILLING REPORT

43 BOX 800 TULSA OK 74101

CONTRACTOR

DATE

Discovery Drilling Inc

7-11-77

COMPANY

LEASE

WELL NO.

RIG NO.

Thomas C Lake

Ever

2

1

DISTRICT

COUNTY

STATE

D. P. STRING NO.

SIZE

Wagon

KS

FROM	TO	FORMATION	ROTARY SPEED	WEIGHT ON BIT	PUMP PRES.	NAME	HRS.
4407						DM Shuloh Tomlinson	8
						EM	8
		DST #1 4586 4407 21' Arch				H	8
SLOPE TEST		ACCIDENT: (GIVE NAME)					
@ 4407 FT.		None					
1° DEG. OFF		(8 HRS Co. Time)		(50)		DRLR Bill Keen	

BIT AND COREHEAD RECORD		MUD RECORD		TIME RECORD		MUD DRILL STEM RECORD	
RUN NO.		WEIGHT		DRILLING		SIZE D. P.	None
SIZE		VISC.		TRIP	3	SIZE COLL.	
MAKE		WTR. LOSS. C.C.		OTHER		JTS. D. P.	FT.
SERIAL NO.		FILTER CAKE		REPAIRS		KELLY DOWN	FT.
DEPTH IN		PH.		TRIP 3/157#1	5	COLLARS	FT.
HOURS RUN		MTL. ADDED (REMARKS)		TOTAL		TOTAL	FT.

REMARKS: 11:00 to 1:30 Trip out with 1/2" size up hole. Trip out with DST #1 & make 4:30 Testing 4:30 to 7:00 Trip out w/ test & Break Tool

FROM	TO	FORMATION	ROTARY SPEED	WEIGHT ON BIT	PUMP PRES.	NAME	HRS.
4407	4507	Line	80	35000	800	DM Bob Allen	8
						EM	8
						H	8
SLOPE TEST		ACCIDENT: (GIVE NAME)					
@ FT.		None					
DEG. OFF		(2 1/4 HRS Co. Time)		(50)		DRLR CLIFF HIRYFIELD	

BIT AND COREHEAD RECORD		MUD RECORD		TIME RECORD		MUD DRILL STEM RECORD		
RUN NO.	7	WEIGHT	9.4	4.3	DRILLING	5 3/4	SIZE D. P.	2091
SIZE	2 7/8	VISC.	47	56	CORING	1/4	SIZE COLL.	1 1/2
MAKE	GT18C	WTR. LOSS. C.C.	8.0	9.0	OTHER		JTS. D. P.	1 CAT
SERIAL NO.	04175	FILTER CAKE	4/32	4/32	REPAIRS	1/4	KELLY DOWN	35.45
DEPTH IN	232	PH.	8.5		TRIP	1 3/4	COLLARS	6 HULL
HOURS RUN	96	MTL. ADDED (REMARKS)			CFS	1/2	TOTAL	FT.

REMARKS: 7:00-8:45 FINISH BREAKING & LAYING TOOL DOWN, CLEAN UP AROUND RIG. SECURE GO IN HOLE. 8:45-9:15 DNG. 9:15-9:30 FILL PREMIX W/ MUD. 9:30-2:30 DNG. 2:30-3:00 CFS @ 4507.

FROM	TO	FORMATION	ROTARY SPEED	WEIGHT ON BIT	PUMP PRES.	NAME	HRS.
4507	4515	MISSISSIPPIAN	80	35000	800	DM Terry Wickham	8
						EM	8
		DST #2 4502-15 13' Arch				H	8
SLOPE TEST		ACCIDENT: (GIVE NAME)					
@ FT.							
DEG. OFF		(7 HRS Co. Time)		(50)		DRLR DAVE DEERING	

BIT AND COREHEAD RECORD		MUD RECORD		TIME RECORD		MUD DRILL STEM RECORD		
RUN NO.	2	WEIGHT			DRILLING	1/2	SIZE D. P.	None
SIZE	2 7/8	VISC.			CORING	1/2	SIZE COLL.	
MAKE	GT18C	WTR. LOSS. C.C.			OTHER		JTS. D. P.	FT.
SERIAL NO.	04175	FILTER CAKE			REPAIRS	3/4	KELLY DOWN	FT.
DEPTH IN	232	PH.			TRIP		COLLARS	FT.
HOURS RUN	96	MTL. ADDED (REMARKS)			DST #2	5 1/2	TOTAL	FT.

REMARKS: 3:00 to 3:30 CFS @ 4507 3:30 to 3:45 DNG. 3:45 to 5:30 CFS @ 4515 5:30 to 7:15 TRIP OUT W/ TEST & BREAK TOOL 7:15 to 7:45 MAKE UP TOOL 7:45 to 8:45 TRIP IN AT TOOL 8:45 to 11:00 TESTING

ORIGINAL

Thursday

DAILY DRILLING REPORT

NEWELL 43 BOX 800 TULSA OK 74101

CONTRACTOR

Drumming Drilling Line

DATE

7-10-97

COMPANY

Thomas C Lutz

LEASE

Evel 8

WELL NO.

2

RIG NO.

1

DISTRICT

COUNTY

McC

STATE

OK

D. P. STRING NO.

SIZE

FROM	TO	FORMATION	ROTARY SPEED	WEIGHT ON BIT	PUMP PRES.		NAME	HRS.
4200	4236	lime				DM	Shelby Tomlinson	8
						EM	Randy Benson	8
						H	Chris Motal	8
SLOPE TEST		ACCIDENT: (GIVE NAME)						
@ FT.		None						
DEG. OFF								

(18.06 RPM)

(50)

BIT AND COREHEAD RECORD		MUD RECORD		TIME RECORD		MUD DRILL-STEM RECORD	
RUN NO.	2	WEIGHT	7	DRILLING	7/4	SIZE D. P.	None
SIZE	1 1/2	VISC.	46	CORING	1/2	SIZE COLL.	
MAKE	GT 120	WTR. LOSS-C.C.		OTHER	1/4	JTS. D. P.	FT.
SERIAL NO.	D41175	FILTER CAKE		REPAIRS		KELLY DOWN	FT.
DEPTH IN	232	PH.		TRIP		COLLARS	FT.
HOURS RUN	79 3/4	MTL. ADDED (REMARKS)				TOTAL	FT.

REMARKS: 7:00-7:00 Drlg w/ 1/4 HR Rig @ 4135'

FROM	TO	FORMATION	ROTARY SPEED	WEIGHT ON BIT	PUMP PRES.		NAME	HRS.
4236	4356	lime	80	40,000	850	DM	BOB ALLEN	8
						EM	LARRY MILLER	8
						H	CARL KINDERKNECHT	8
SLOPE TEST		ACCIDENT: (GIVE NAME)						
@ FT.		None						
DEG. OFF								

(16.6 F.P.H.)

(50)

BIT AND COREHEAD RECORD		MUD RECORD		TIME RECORD		MUD DRILL-STEM RECORD	
RUN NO.	2	WEIGHT	7.3 2.1 9.4	DRILLING	7 1/4	SIZE D. P.	None
SIZE	2 7/8	VISC.	46 50 52	CORING	1/2	SIZE COLL.	
MAKE	GT 150	WTR. LOSS-C.C.	9.9	OTHER	1/4	JTS. D. P.	FT.
SERIAL NO.	D41175	FILTER CAKE	7/32	REPAIRS		KELLY DOWN	FT.
DEPTH IN	232	PH.	11.0	TRIP		COLLARS	FT.
HOURS RUN	87	MTL. ADDED (REMARKS)				TOTAL	FT.

REMARKS: 7:00-3:00 Drlg w/ 1/4 HR Rig @ 4260'

FROM	TO	FORMATION	ROTARY SPEED	WEIGHT ON BIT	PUMP PRES.		NAME	HRS.
4356	4407	lime	80	40,000	100	DM	TERRY WICKHAM	8
						EM	JEFF BROOK	8
						H	JOHN WICKHAM	8
SLOPE TEST		ACCIDENT: (GIVE NAME)						
@ FT.		DST #1 4386-4407 21' ME						
DEG. OFF								

(4 1/4 HRS (o. Time))

(50)

BIT AND COREHEAD RECORD		MUD RECORD		TIME RECORD		MUD DRILL-STEM RECORD	
RUN NO.	2	WEIGHT	6.4	DRILLING	3 1/4	SIZE D. P.	
SIZE	2 7/8	VISC.	48	CORING	1/2	SIZE COLL.	
MAKE	GT 150	WTR. LOSS-C.C.		OTHER	1/4	JTS. D. P.	FT.
SERIAL NO.	D41175	FILTER CAKE		REPAIRS		KELLY DOWN	FT.
DEPTH IN	232	PH.		TRIP	1 1/4	COLLARS	FT.
HOURS RUN	90 1/4	MTL. ADDED (REMARKS)				TOTAL	FT.

REMARKS: 3:00-4:45 Dec 4:45-5:15 1/2 HR @ 4383 5:15-6:45 Dec 6:45-7:45 Dec @ 4407 7:45-8:45 DST TRIP 8:45-9:45 Dec 9:45-11:00 TRIP OUT FOR DST #1

ORIGINAL

Wednesday

DAILY DRILLING REPORT
 43 BOX 800
 TULSA OK 74101

CONTRACTOR
 Discovery Drilling Inc

DATE
 7-9-47

COMPANY
 Thomas C. Int'l

LEASE
 Evel E

WELL NO. 2 RIG NO. 1

DISTRICT

COUNTY
 Nowata

STATE
 Ok

D. P. STRING NO. SIZE

FROM	TO	FORMATION	ROTARY SPEED	WEIGHT ON BIT	PUMP PRES.		NAME	HRS.
3150	3728	Shale	80	35,000	800	DM	Shuloh Tomlinson	8
						EM	Shuloh Tomlinson	8
						H	Cliff Mayfield	8
SLOPE TEST		ACCIDENT: - (GIVE NAME)		None		H		
@	FT.							
DEG. OFF								

BIT AND COREHEAD RECORD			MUD RECORD		TIME RECORD		MUD DRILL-STEM RECORD	
RUN NO.	2		WEIGHT	8.8	DRILLING	6 1/2	SIZE D. P.	35 Gel
SIZE	2 7/8		VISC.	45	CORING ANN	1/2	SIZE COLL.	1 Caustic
MAKE	GT 16 C		WTR. LOSS. C.C.		OTHER	Rig	JTS. D. P.	2 Lignite FT.
SERIAL NO.	124125		FILTER CAKE		REPAIRS	30 REPAIR	KELLY DOWN	2 G. Blk. FT.
DEPTH IN	232		PH.		TRIP		COLLARS	110 1/2 FT.
HOURS RUN	58 1/4		MTL. ADDED (REMARKS)				TOTAL	110 1/2 FT.

REMARKS: 7:00-7:15 Drlg w/ 4 hr Rig @ 3600' w/ 1/2 hr Jet @ 3600' to 3728' to clean section

FROM	TO	FORMATION	ROTARY SPEED	WEIGHT ON BIT	PUMP PRES.		NAME	HRS.
3728	3941	LIME & SHALE	80	55,000	800	DM	Bob Milen	8
						EM	LARRY MILNEK	8
						H	CARL KINDERNECHT	8
SLOPE TEST		ACCIDENT: - (GIVE NAME)		None		H		
@	FT.							
DEG. OFF								

BIT AND COREHEAD RECORD			MUD RECORD		TIME RECORD		MUD DRILL-STEM RECORD	
RUN NO.	2		WEIGHT	8.8	DRILLING	7	SIZE D. P.	30 GEL
SIZE	2 7/8		VISC.	45	CORING ANN	1/2	SIZE COLL.	2 CAUSTIC
MAKE	GT 16 C		WTR. LOSS. C.C.	13.4	OTHER	Rig	JTS. D. P.	2 L.I.F.
SERIAL NO.	041125		FILTER CAKE	7/32	REPAIRS		KELLY DOWN	5 S.S. RES
DEPTH IN	232		PH.	11	TRIP	PRE-MIX	COLLARS	REST OF DAYS
HOURS RUN	65 1/4		MTL. ADDED (REMARKS)				TOTAL	FT.

REMARKS: 7:00-7:15 W.P.S @ 3732' 7:15-12:00 Drlg. 12:00-12:15 Pump 400 BLP. MUD IN PRE-MIX. 12:15-3:00 Drlg

FROM	TO	FORMATION	ROTARY SPEED	WEIGHT ON BIT	PUMP PRES.		NAME	HRS.
3941	4105	LIME & SHALE	80	35,000	800	DM	TERRY WILKHAM	8
						EM	JEFF BRICK	8
						H	JOHN WILKHAM	8
SLOPE TEST		ACCIDENT: - (GIVE NAME)		None		H		
@	FT.							
DEG. OFF								

BIT AND COREHEAD RECORD			MUD RECORD		TIME RECORD		MUD DRILL-STEM RECORD	
RUN NO.	2		WEIGHT	9.1	DRILLING	1 1/4	SIZE D. P.	NONE
SIZE	2 7/8		VISC.	44	CORING ANN	1/2	SIZE COLL.	
MAKE	GT 16 C		WTR. LOSS. C.C.	12.0	OTHER	Rig	JTS. D. P.	FT.
SERIAL NO.	D41125		FILTER CAKE	1/32	REPAIRS		KELLY DOWN	FT.
DEPTH IN	232		PH.	11.0	TRIP		COLLARS	FT.
HOURS RUN	102		MTL. ADDED (REMARKS)				TOTAL	FT.

REMARKS: 3:00 to 3:15 W.P.S @ 3948 3:15 to 4:00 Drlg

Tuesday

DAILY DRILLING REPORT

Form 43 BOX 800 TULSA OK 74101

CONTRACTOR

Drilling Drilling Inc

DATE 7-8-47

COMPANY

Thomas C. L...

LEASE

Level "E"

WELL NO.

2

RIG NO.

1

DISTRICT

COUNTY

STATE

D. P. STRING NO.

SIZE

FROM	TO	FORMATION	ROTARY SPEED	WEIGHT ON BIT	PUMP PRES.		NAME	HRS.
2961	3190	Shale	80	35000	800	DM	Shilah Tomlinson	8
						EM	Kenny Brown	8
						H	Cliff Mayfield	8
SLOPE TEST		ACCIDENT: (GIVE NAME) None				H		
@	FT.					H		
DEG. OFF						H		

BIT AND COREHEAD RECORD			MUD RECORD			TIME RECORD			DRILL-STEM RECORD		
RUN NO.			WEIGHT			DRILLING	6 3/4		SIZE D. P.	50 Gal	
SIZE			VISC.			CORING	3 1/4		SIZE COLL.	2	caustic
MAKE			WTR. LOSS. C. C.			OTHER	2 1/2		JTS. D. P.	1	caustic
SERIAL NO.			FILTER CAKE			REPAIRS			KELLY DOWN	4	caustic
DEPTH IN			PH.			TRIP			COLLARS	12	caustic
HOURS RUN	40		MTL. ADDED (REMARKS)			TOTAL	2 1/4		TOTAL	2 cups	Disposal

REMARKS: 7:00-7:10 Drilling, 7:10-7:30 Drilling @ 3206 w/4hr Jet #1 @ 3113

FROM	TO	FORMATION	ROTARY SPEED	WEIGHT ON BIT	PUMP PRES.		NAME	HRS.
3190	3344	SHALE & LIME	80	35000	850	DM	Bob Miller	8
						EM	HARRY MULINER	8
						H	CARL KIMMERKNECHT	8
SLOPE TEST		ACCIDENT: (GIVE NAME) None				H		
@	FT.					H		
DEG. OFF						H		

BIT AND COREHEAD RECORD			MUD RECORD			TIME RECORD			DRILL-STEM RECORD		
RUN NO.	2		WEIGHT	8.5	816.9	DRILLING	5		SIZE D. P.	75 gal	
SIZE	7 1/8		VISC.			CORING	1 1/2		SIZE COLL.	1	caustic
MAKE	GTISC		WTR. LOSS. C. C.			OTHER	1 1/4		JTS. D. P.	1	caustic
SERIAL NO.	D4195		FILTER CAKE			REPAIRS			KELLY DOWN	2	caustic
DEPTH IN	232		PH.			TRIP			COLLARS	3	caustic
HOURS RUN	45		MTL. ADDED (REMARKS)			TOTAL	2 1/4		TOTAL	3 cups	Disposal

REMARKS: 7:00-7:15 Drilling, 7:15-7:30 Drilling @ 3206 7:30-8:15 Lost Returns @ 3206 8:15-9:30 Drilling, 9:30-11:00 Lost Returns @ 3241, 11:00-3:00 Drilling.

FROM	TO	FORMATION	ROTARY SPEED	WEIGHT ON BIT	PUMP PRES.		NAME	HRS.
3344	3560	SHALE & LIME	80	35000	800	DM	TERRY WICKHAM	8
						EM	JEFF BROCK	8
						H	JOHN WICKHAM	8
SLOPE TEST		ACCIDENT: (GIVE NAME) None				H		
@	FT.					H		
DEG. OFF						H		

BIT AND COREHEAD RECORD			MUD RECORD			TIME RECORD			DRILL-STEM RECORD		
RUN NO.	3		WEIGHT			DRILLING	6 3/4		SIZE D. P.	NONE	
SIZE	7 1/8		VISC.			CORING	1 1/2		SIZE COLL.		
MAKE	GTISC		WTR. LOSS. C. C.			OTHER	1 1/4		JTS. D. P.		
SERIAL NO.	D4195		FILTER CAKE			REPAIRS			KELLY DOWN		
DEPTH IN	332		PH.			TRIP			COLLARS		
HOURS RUN	31 3/4		MTL. ADDED (REMARKS)			TOTAL	1 1/2		TOTAL		

REMARKS: 3:00-3:15 Drilling, 3:15-3:30 Drilling @ 3360 3:30-9:15 Drilling, 9:15-9:45 Drilling, 9:45-11:00 Drilling.

ORIGINAL

Monday

DAILY DRILLING REPORT
 NEW 43 BOX 600
 TULSA OK 74101

CONTRACTOR <i>Discovery Drilling Inc</i>	DATE <i>7-7-97</i>
COMPANY <i>Thomas C Lotz</i>	LEASE <i>Evel "E"</i>
DISTRICT	WELL NO. <i>2</i>
COUNTY <i>Now</i>	RIG NO. <i>1</i>
STATE <i>Ks</i>	D. P. STRING NO.
	SIZE

FROM	TO	FORMATION	ROTARY SPEED	WEIGHT ON BIT	PUMP PRES.		NAME	HRS.
1991	2014	Arbitrate				DM	<i>John ...</i>	
2014	2358	shale	30	25000	800	EM	<i>...</i>	
			(56.46 RPM)			H	<i>...</i>	
SLOPE TEST		ACCIDENT: - (GIVE NAME)		None		H		
@	FT.							
DEG. OFF								

BIT AND COREHEAD RECORD		MUD RECORD		TIME RECORD		MUD DRILL STEM RECORD	
RUN NO.	<i>2</i>	WEIGHT		DRILLING	<i>6 1/2</i>	SIZE D. P.	<i>None</i>
SIZE	<i>7 7/8</i>	VISC.		CORING	<i>Conn</i>	SIZE COLL.	
MAKE	<i>GT 15C</i>	WTR. LOSS-C.C.		OTHER	<i>VRig</i>	JTS. D. P.	FT.
SERIAL NO.	<i>D41X5</i>	FILTER CAKE		REPAIRS		KELLY DOWN	FT.
DEPTH IN	<i>232</i>	PH.		TRIP		COLLARS	FT.
HOURS RUN	<i>20 1/4</i>	MTL. ADDED (REMARKS)		<i>Jet</i>	<i>1/4</i>	TOTAL	FT.

REMARKS: *11:00 to 12:00 Dilg. w/ 1997 w/ 1/4 in Jet "C" 2275'*

FROM	TO	FORMATION	ROTARY SPEED	WEIGHT ON BIT	PUMP PRES.		NAME	HRS.
2358	2715	SHALE	30	30,000	800	DM	<i>BOB NIEN</i>	8
			(54.92 RPM)			EM	<i>LARRY WILINER</i>	8
						H	<i>CARL KINDERKNECHT</i>	8
SLOPE TEST		ACCIDENT: - (GIVE NAME)		None		H		
@	FT.							
DEG. OFF								

BIT AND COREHEAD RECORD		MUD RECORD		TIME RECORD		DRILL STEM RECORD	
RUN NO.	<i>7</i>	WEIGHT		DRILLING	<i>6 1/2</i>	SIZE D. P.	<i>3596L</i>
SIZE	<i>7 7/8</i>	VISC.		CORING	<i>Conn</i>	SIZE COLL.	<i>1 CAUST</i>
MAKE	<i>GT 15C</i>	WTR. LOSS-C.C.		OTHER	<i>VRig</i>	JTS. D. P.	<i>1 LIT</i>
SERIAL NO.	<i>D41X5</i>	FILTER CAKE		REPAIRS		KELLY DOWN	<i>2 S. ASY</i>
DEPTH IN	<i>232</i>	PH.		TRIP		<i>1 L. K. H. V. / 1 O. H. U. L.</i>	<i>2 S. ASY</i>
HOURS RUN	<i>26 1/4</i>	MTL. ADDED (REMARKS)		<i>JET</i>	<i>1/4</i>	TOTAL	<i>1 CH. DRISP.</i>

REMARKS: *7:00 - 7:15 VRig @ 2368', 7:15 - 8:15 Dilg 8:15 - 8:30 Jet "C" 2461' 4 ADDFLU 8:30 - 3:00 Dilg.*

FROM	TO	FORMATION	ROTARY SPEED	WEIGHT ON BIT	PUMP PRES.		NAME	HRS.
2715	2961	SHALES	30	30000	800	DM	<i>TERRY WICKHAM</i>	8
			(378 RPM)			EM	<i>JEFF BROCK</i>	8
						H	<i>JOHN WICKHAM</i>	8
SLOPE TEST		ACCIDENT: - (GIVE NAME)		None		H		
@	FT.							
DEG. OFF								

BIT AND COREHEAD RECORD		MUD RECORD		TIME RECORD		MUD DRILL STEM RECORD	
RUN NO.	<i>2</i>	WEIGHT		DRILLING	<i>6 1/2</i>	SIZE D. P.	<i>CEL 30</i>
SIZE	<i>7 7/8</i>	VISC.	<i>A</i>	CORING	<i>Conn</i>	SIZE COLL.	<i>1 1/2</i>
MAKE	<i>GT 15C</i>	WTR. LOSS-C.C.		OTHER	<i>VRig</i>	JTS. D. P.	<i>2</i>
SERIAL NO.	<i>D41X5</i>	FILTER CAKE		REPAIRS		KELLY DOWN	<i>1</i>
DEPTH IN	<i>232</i>	PH.		TRIP		<i>DRIPERS</i>	<i>2 1/2</i>
HOURS RUN	<i>33 1/4</i>	MTL. ADDED (REMARKS)		<i>JET</i>	<i>1/2</i>	TOTAL	<i>HULLS 2</i>

REMARKS: *3:00 to 3:50 Dilg 3:50 to 3:45 VRig @ 2741 3:45 to 4:15 Dilg 4:15 to 4:30 Jet "C" 2712 4:30 to 9:15 Dilg 9:15 to 9:30 Jet "C" 2728 9:30 to Dilg*

ORIGINAL

DAILY DRILLING REPORT

NEW 43 BOX 800 TULSA OK 74101

CONTRACTOR

Discovery Drilling Inc

DATE

Sunday
7-6-97

COMPANY

Thomas C. Lotz

LEASE

Evel "E"

WELL NO.

2

RIG NO.

1

DISTRICT

COUNTY

Now

STATE

Ks

D. P. STRING NO.

SIZE

FROM	TO	FORMATION	ROTARY SPEED	WEIGHT ON BIT	PUMP PRES.		NAME	HRS.
127	432	SAND & SHALE	100	25,000	650	DM	Shiloh Thompson	8
						EM	Randy Braun	8
						H	Chris Madal	8
SLOPE TEST		ACCIDENT: (GIVE NAME)	None					
@	FT.							
DEG. OFF								

(50) DRLR Bill Skeen

BIT AND COREHEAD RECORD		MUD RECORD		TIME RECORD		DRILL STEM RECORD	
RUN NO.	2	WEIGHT		DRILLING	3	SIZE D. P.	
SIZE	7/8	VISC.		CORING	1	SIZE COLL.	
MAKE	GT 18C	WTR. LOSS. C.C.		OTHER		JTS. D. P.	FT.
SERIAL NO.	D41YS	FILTER CAKE		REPAIRS	1/4	KELLY DOWN	FT.
DEPTH IN	232	PH.		TRIP	1/2	COLLARS	FT.
HOURS RUN	3	MTL. ADDED (REMARKS)		WOC	3/4	TOTAL	FT.

REMARKS: 11:00 to 2:45 W.O.C. 2:45 to 7:00 Drilling

FROM	TO	FORMATION	ROTARY SPEED	WEIGHT ON BIT	PUMP PRES.		NAME	HRS.
432	1313	SHALE	100	25,000	800	DM	BOB ILLIEN	8
						EM	LARRY ILLIEN	8
						H	CHARL KUNDERKNECHT	8
SLOPE TEST		ACCIDENT: (GIVE NAME)	None					
@	FT.							
DEG. OFF								

(176.8 FPH)

(50) DRLR CLIFF HAYFIELD

BIT AND COREHEAD RECORD		MUD RECORD		TIME RECORD		DRILL STEM RECORD	
RUN NO.	2	WEIGHT		DRILLING	5	SIZE D. P.	10 9/16
SIZE	7/8	VISC.		CORING	2	SIZE COLL.	1 1/2
MAKE	GT 18C	WTR. LOSS. C.C.		OTHER	1/4	JTS. D. P.	6 1/2
SERIAL NO.	D41YS	FILTER CAKE		REPAIRS		KELLY DOWN	FT.
DEPTH IN	232	PH.		TRIP		COLLARS	FT.
HOURS RUN	8	MTL. ADDED (REMARKS)		Lost Returns	3/4	TOTAL	FT.

REMARKS: 7:00-9:00 Drilling w/ 1/4" Rigs @ 455, 9:00-9:45 Lost Returns @ 682, 9:45-3:00 Drilling

FROM	TO	FORMATION	ROTARY SPEED	WEIGHT ON BIT	PUMP PRES.		NAME	HRS.
1316	1980	SAND & SHALE	100	25,000	800	DM	TERRY WICKHAM	8
1980	1991	ANHYDRITE	80	30,000	800	EM	JEFF BROCK	8
						H	JOAN WICKHAM	8
SLOPE TEST		ACCIDENT: (GIVE NAME)						
@	FT.							
DEG. OFF								

(117.3 FPH)

(50) DRLR DAVE BREKING

BIT AND COREHEAD RECORD		MUD RECORD		TIME RECORD		DRILL STEM RECORD	
RUN NO.	2	WEIGHT		DRILLING	5 1/2	SIZE D. P.	
SIZE	7/8	VISC. A.		CORING	1 3/4	SIZE COLL.	
MAKE	GT 18C	WTR. LOSS. C.C.		OTHER	1/4	JTS. D. P.	FT.
SERIAL NO.	D41YS	FILTER CAKE		REPAIRS		KELLY DOWN	FT.
DEPTH IN	232	PH.		TRIP		COLLARS	FT.
HOURS RUN	13 1/4	MTL. ADDED (REMARKS)		JET	1/4	TOTAL	FT.

REMARKS: 3:00 to 3:15 @ 1316 @ 1316 3:15 to 7:30 Drilling 7:30 to 7:45 Jet @ 1782 7:45 to 11:00 Drilling

ORIGINAL

Saturday

DAILY DRILLING REPORT

BOX 800
TULSA OK 74101

CONTRACTOR

Discovery Drilling Inc.

DATE

7-5-97

COMPANY

Thomas C. Lutz

LEASE

Evel "E"

WELL NO.

Z

RIG NO.

1

DISTRICT

COUNTY

Ness

STATE

Ks

D. P. STRING NO.

SIZE

FROM	TO	FORMATION	ROTARY SPEED	WEIGHT ON BIT	PUMP PRES.	NAME	HRS.
0						DM Shlah Tomlinson	8
						EM Randy Brown	8
						H Chris Mofol	8
SLOPE TEST		ACCIDENT: - (GIVE NAME)				H	
@	FT.	None				H	
DEG. OFF				(50)		H	8

BIT AND COREHEAD RECORD		MUD RECORD		TIME RECORD		DRILL STEM RECORD	
RUN NO.		WEIGHT		DRILLING		SIZE D. P.	12 1/2
SIZE		VISC.		CORING		SIZE COLL.	
MAKE		WTR. LOSS-C.C.		OTHER		JTS. D. P.	FT.
SERIAL NO.		FILTER CAKE		REPAIRS		KELLY DOWN	FT.
DEPTH IN		PH.		TRIP		COLLARS	FT.
HOURS RUN		MTL. ADDED (REMARKS)		Rig up		TOTAL	FT.

REMARKS: 7:00 to 3:00 Dig collar & Ditcher Rig up

FROM	TO	FORMATION	ROTARY SPEED	WEIGHT ON BIT	PUMP PRES.	NAME	HRS.
0	63	SURFACE CLAY & SHALE + POST ROCK	90	ALL	500	DM BOB ALLEN	8
						EM HARRY MILLNER	8
						H CARL KINDERKNECHT	8
SLOPE TEST		ACCIDENT: - (GIVE NAME)				H	
@	FT.					H	
DEG. OFF				(50)		H	8

BIT AND COREHEAD RECORD		MUD RECORD		TIME RECORD		DRILL STEM RECORD	
RUN NO.	1	WEIGHT		DRILLING		SIZE D. P.	
SIZE	12 1/4	VISC.		CORING	1 1/2	SIZE COLL.	
MAKE	BLIF	WTR. LOSS-C.C.		OTHER	SET	JTS. D. P.	FT.
SERIAL NO.	RRA78223	FILTER CAKE		REPAIRS	1 1/2	KELLY DOWN	FT.
DEPTH IN	9	PH.		TRIP	RAT HOLE 1/2	COLLARS	FT.
HOURS RUN	1	MTL. ADDED (REMARKS)				TOTAL	FT.

REMARKS: 7:00 LOAD OUT RIG & MOVE 11:30 - 1:00 SET RIG IN & RIG UP. 1:00 - 1:30 DRILL RAT HOLE. 1:30 - 3:00 DIG SURFACE.

FROM	TO	FORMATION	ROTARY SPEED	WEIGHT ON BIT	PUMP PRES.	NAME	HRS.
63	232	SURFACE SANDY SHALE	190	ALL	600	DM TERRY WICKHAM	8
						EM JEFF BROCK	8
						H JOHN WICKHAM	8
SLOPE TEST		ACCIDENT: - (GIVE NAME)				H	
@	232 FT.	NONE				H	
DEG. OFF				(50)		H	8

BIT AND COREHEAD RECORD		MUD RECORD		TIME RECORD		DRILL STEM RECORD	
RUN NO.	1	WEIGHT		DRILLING	1 1/4	SIZE D. P.	NONE
SIZE	12 1/4	VISC.	P	CORING	1	SIZE COLL.	
MAKE	WILLIAMS	WTR. LOSS-C.C.	0	OTHER	1 1/2	JTS. D. P.	FT.
SERIAL NO.	RRA78223	FILTER CAKE		REPAIRS	1 1/2	KELLY DOWN	FT.
DEPTH IN	8	PH.		TRIP	1 1/2	COLLARS	FT.
HOURS RUN	2 1/4	MTL. ADDED (REMARKS)				TOTAL	FT.

REMARKS: 3:00 to 5:15 Drill surface hole 5:15 to 5:45 cement 5:45 to 6:30 Trip out w/ bit & run 8 1/2 sec. 6:30 to 6:45 Circ 8 1/2 6:45 to 7:15 Cement 7:15 to 11:00 NOC

" Windy "

PIPE STRAIN EVEL "E" #2

2	3	4	5
6165	6170	6300	6240
6164	6295	6210	6296
6300	6110	6100	6185
6170	6195	6260	6221
6235	6130	6100	6252
6140	6090	6195	6212
6260	6110	6280	6183
<u>6070</u>	<u>6035</u>	<u>6065</u>	<u>6154</u>
496-74	494-45	495-10	497-43
			494-77

6	7	8
6061	6262	6213
6070	6256	6162
6271	6174	6170
6115	6151	6284
6163	6341	6309
6232	6121	6182
6190	6151	<u>6035</u> 2 st d
<u>6294</u>	<u>6175</u>	433-55
494-39	496-31	

ORIGINAL

4414-79 B
 4414-26 S

 -53



Discovery Drilling

Pipe and Tubing Tally Book

ORIGINAL

DATE 7/12/97 COMPANY Thomas C. Lutz LEASE Evel "E" Well No. 2

SIZE 5 1/2 WEIGHT 14 # MAKE _____ GRADE _____ RANGE _____

THREAD 8RB COLLAR LENGTH _____ CONDITION New TRANSFER NOS. _____ OVERALL TALLY _____
THREADSOFF TALLY _____

Joint No.	Feet	Hnd	Joint No.	Feet	Hnd	Joint No.	Feet	Hnd	Joint No.	Feet	Hnd	Joint No.	Feet	Hnd	Joint No.	Feet	Hnd	Joint No.	Feet	Hnd	Joint No.	Feet	Hnd																								
1	1A	60	21	31	15	41	30	96	61	24	75	81	43	87	101	42	16	121	42	10	141																										
2	10	36	22	30	58	42	30	15	62	32	81	82	43	38	102	42	62	122	42	51	142																										
3	32	08	23	33	59	43	31	38	63	31	69	83	43	17	103	42	31	123	42	30	143																										
4	29	68	24	33	19	44	31	35	64	31	35	84	42	58	104	42	78	124	42	50	144																										
5	29	39	25	33	64	45	31	78	65	28	77	85	42	80	105	42	94	125	42	74	145																										
6	30	06	26	32	35	46	27	14	66	31	88	86	43	41	106	42	29	126	42	63	146																										
7	27	64	27	32	79	47	31	76	67	42	70	87	42	34	107	42	00	127			147																										
8	33	40	28	29	46	48	31	97	68	43	34	88	33	30	108	42	61	128			148																										
9	34	33	29	33	32	49	29	65	69	41	71	89	41	14	109	42	38	129			149																										
10	32	75	30	34	79	50	32	92	70	43	14	90	42	27	110	42	51	130			150																										
11	34	49	31	28	35	51	31	56	71	42	52	91	43	41	111	41	66	131			151																										
12	31	73	32	29	00	52	33	06	72	43	45	92	42	44	112	41	43	132			152																										
13	32	93	33	29	02	53	30	67	73	42	04	93	42	93	113	42	51	133			153																										
14	32	50	34	30	52	54	32	84	74	42	20	94	42	62	114	42	81	134			154																										
15	31	60	35	32	74	55	30	93	75	43	39	95	41	93	115	42	44	135			155																										
16	30	74	36	31	22	56	31	88	76	42	26	96	42	54	116	42	91	136			156																										
17	30	14	37	28	61	57	28	30	77	41	53	97	42	39	117	42	19	137			157																										
18	33	02	38	31	04	58	32	27	78	42	23	98	42	57	118	42	80	138			158																										
19	31	14	39	31	90	59	30	25	79	43	38	99	42	32	119	42	33	139			159																										
20	33	18	40	31	68	60	29	10	80	42	43	100	42	73	120	43	30	140			160																										
																						591	76	628	94	619	92	777	84	843	34	848	98	254	48												
																						481	16											753	09	Totals				4565	26						

Drillers TD 4524 Loggers TD 4523

No. Jts. Run 123 Size 5 1/2 Wt. 14 # Tested 4000 #

Cent @ *2(4488) *4(4427) *6(4367) *8(4306) *78(2002)

Basket @ *79(2002) D.V. Tool @ *79(1958) Port Collar @ _____

Cemented By Halliburton SKs. Type Cemen Top Stage w/ 150 sks 60/40 Per Completal @ 3:30 AM

Flush Top Stage w/ 225 sks Mid Con II Completal @ 4:30 AM 7/13/97

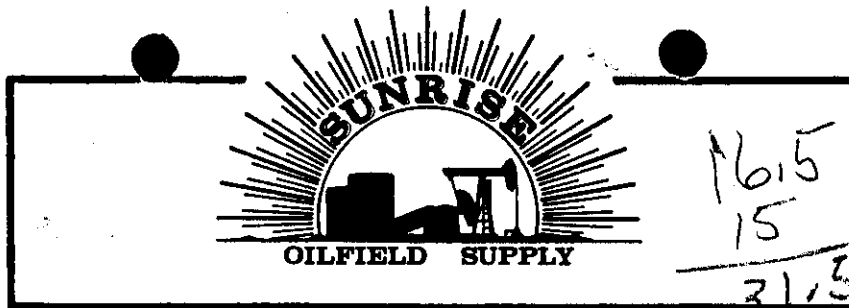
Jts. To Be Left Out *1(10.60) *61(24.75) *126(42.63) (Dial Circ.)

Shoe Jt. 10.36 Pipe Set @ 4499.28 Off Bottom 24'

Plug Down 4:30 A.M. P.M. 7:13 AM Rig Release @ _____ A.M. P.M. / /

Job By Alm

Pipe Left On Location 3 Jts. Talley _____ Threads On _____



PIPE TALLY

DATE DEL. 7-12 19 91

CHARGE TO Tom LUTZ

LEASE EVEL #2

WELL NO.

DESCRIPTION OCT A 5 1/2 14 JSS MAV 9TLR 30R 2

TALLIED BY Amy

ORIGINAL

RELEASE NO.

	FEET	INCH	FEET	INCH	FEET	INCH	FEET	INCH	FEET	INCH	FEET	INCH
1	42	90	42	80	31	50	21	70	31	30	31	70
2	42	90	42	70	29	50	32	90	29	90	32	90
3	42	80	43	-	31	30	28	50	29	10	27	70
4	42	60	42	50	32	40	33	40	34	50	29	50
5	42	50	42	70	31	50	31	40	30	40		
6	42	80	43	-	31	40	33	30	33	90		
7	42	80	42	80	30	60	30	80	33	20		
8	42	70	42	90	33	90	32	-	24	80		
9	43	30	42	70	32	90	33	50	31	90		
10	42	90	43	10	32	50	29	70	30	30		
11	42	70	43	70	32	90	28	40	31	80		
12	42	80	43	-	33	20	30	50	32	60		
13	42	80	42	70	31	90	30	50	34	50		
14	42	80			31	50	31	70	33	50		
15	42	90			33	-	31	90	30	10		
16	42	80			29	80	31	90	32	60		
17	43	20			32	-	28	40	31	70		
18	42	70			31	50	29	10	32	-		
19	42	70			33	10	31	70	31	90		
20	43	10			27	70	33	70	33	10		
1	856	20	556	60	635	50	623	80	631	40	122	00

THE ABOVE 97 JOINTS RECEIVED IN GOOD ORDER

BY

ORIGINAL TO REMAIN IN BOOK - DUPLICATE TO BE ATTACHED TO CUSTOMER'S INVOICE - TRIPLICATE TO BE GIVEN TO CUSTOMER'S REPRESENTATIVE AT TIME OF DELIVERY.

342550



PIPE TALLY

DATE DEL. 7-12 19 97

CHARGE TO Tom L...

LEASE FUEL F#2 WELL NO. _____

DESCRIPTION Oct 15 42 1 1/2 155 etc PARAGON

TALLIED BY _____

RELEASE NO. _____

ORIGINAL

	FEET	INCH	FEET	INCH	FEET	INCH	FEET	INCH	FEET	INCH	FEET	INCH
1	41	95	42	90	42	90						
2	43	40	41	70	43	40						
3	42	45	42	00								
4	42	50	42	60								
5	42	50	42	75								
6	42	05										
7	32	55	43	40								
8	42	15										
9	42	00										
10	42	25										
11	41	90										
12	43	15										
13	43	60										
14	42	75										
15	43	70										
16	41	80										
17	43	30										
18	42	65										
19	42	65										
20	41	40										
1	848	25	303	30								

THE ABOVE 27 JOINTS RECEIVED IN GOOD ORDER

BY 4502080 TOTAL (124 joints) 2 total jobs

ORIGINAL TO REMAIN IN BOOK — DUPLICATE TO BE ATTACHED TO CUSTOMER'S INVOICE — TRIPLICATE TO BE GIVEN TO CUSTOMER'S REPRESENTATIVE AT TIME OF DELIVERY.

1150 55



Tom Lutz
 ADDRESS
 CITY, STATE, ZIP CODE

NO 361

PAGE 1 OF 1

SERVICE LOCATIONS
 1. *Ness City, La*
 2.
 3.
 4.

WELL/PROJECT NO. #2
 LEASE *Evel E*
 COUNTY/PARISH *Ness*
 STATE *La.*
 CITY
 DATE *7-13-97*
 OWNER *Same*

TICKET TYPE
 SERVICE
 SALES
 CONTRACTOR *Discovery Drilling*
 RIG NAME/NO.
 SHIPPED VIA *C/T*
 DELIVERED TO *Location*
 ORDER NO.

WELL TYPE *Oil*
 WELL CATEGORY *Development*
 JOB PURPOSE *Run Floort Equipment*
 WELL PERMIT NO.
 WELL LOCATION *Utica, 1/3-E, 1 1/2-N, West Side*

REFERRAL LOCATION
 INVOICE INSTRUCTIONS

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	QTY.		UNIT PRICE		AMOUNT
		LOC	ACCT	DF			UM		UM	
500		1			MILEAGE #02	30	mil	1	00	30 00
505		1			Formation PRR Shoe	1	ea	5 1/2	in	1,100 00
508		1			D.U. Tool + Plug Set	1	ea	5 1/2	in	1,800 00
508		1			Centralizers	5	ea	5 1/2	in	30 00
510		1			D.U. Latch down Plug	1	ea	5 1/2	in	250 00
503		1			Cmt. BRACKET	1	ea	5 1/2	in	100 00

ORIGINAL

LEGAL TERMS: Customer hereby acknowledges and agrees to the terms and conditions on the reverse side hereof which include, but are not limited to, **PAYMENT, RELEASE, INDEMNITY, and LIMITED WARRANTY** provisions.

MUST BE SIGNED BY CUSTOMER OR CUSTOMER'S AGENT PRIOR TO START OF WORK OR DELIVERY OF GOODS

X
 DATE SIGNED TIME SIGNED A.M. P.M.

SURVEY	AGREE	UN-DECIDED	DIS-AGREE	PAGE TOTAL
OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?				3,430 00
WE UNDERSTOOD AND MET YOUR NEEDS?				
OUR SERVICE WAS PERFORMED WITHOUT DELAY?				FROM CONTINUATION PAGE(S)
WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY?				
ARE YOU SATISFIED WITH OUR SERVICE?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO			SUB-TOTAL
<input type="checkbox"/> CUSTOMER DID NOT WISH TO RESPOND				APPLICABLE TAXES WILL BE ADDED ON INVOICE

CUSTOMER ACCEPTANCE OF MATERIALS AND SERVICES The customer hereby acknowledges receipt of the materials and services listed on this ticket.

CUSTOMER OR CUSTOMER'S AGENT (PLEASE PRINT) CUSTOMER OR CUSTOMER'S AGENT (SIGNATURE) SWIFT OPERATOR APPROVAL

JOB LOG

SWIFT Services, Inc.

DATE 7-13-97 PAGE NO. 1

CUSTOMER Tom Lutz WELL NO. 212 LEASE Ex 1 E JOB TYPE Long String TICKET NO. 361

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	2230							On Loc. Rig laying down D.P.
	2345							Start 5 1/2" csg. in hole Formation PRR shoe 4499' 4505'
								Cent. 4498', 4497', 4367', 4306', 2002'
								with cm7. Basket D.V. Tool @ 1958'
	0215							Original csg. on bottom circulate
	0320							Drop Ball for PRR shoe
	0230						900	set PRR shoe 900psi
	0250							cm7. Bottom stage 150 sks 40/60 poz
	0330						1,500	Plug down release Hold Drop Bomb
	0340						950	open D.V. tool 950psi cm7. top stage 225 sks Midcon II
	0420						1650	D.V. closing plug down 1650psi Release Drilledup Cir. 10" cut. to surface Job Complete

Handwritten signature

Hays, Kansas
Phone 628-8011

MURRAY CASING CREWS, INC.

CASING & TUBING CREWS

Great Bend, Kansas
Phone 793-7587

BOX 27
GREAT BEND, KANSAS 67530

No 22323

DATE 3-11 1970

Company Thomas C 1, 1, 2 Called By _____

Address _____ E.O. or F.O. No. _____

Lease EV-1 E Well No. 2 County Woods

SERVICE REPORT

Rods _____ Amount: _____

Tubing _____ Amount: _____

Casing 11/4 4505 Ft 5 1/2" ORIGINAL Amount: _____

Power Tongs + 3 men Amount: _____

Waiting Time _____ Amount: _____

Hourly Work _____ Amount: _____

Transportation Charge _____ Miles @ _____ Per mile _____ Amount: _____

5 1/2 S/L + fuel Amount: _____

Tong Operator _____ Amount: _____

Helpers _____ State & Local Taxes _____ Amount: _____

TOTAL SERVICE CHARGE

Remarks: _____

OWWO _____ NEW _____

By TAM



HALLIBURTON ENERGY SERVICES
HAL-1906-P

CHARGE TO
TOM WITZ
ADDRESS
CITY, STATE, ZIP CODE

CUSTOMER COPY
TICKET No. **197108 - X**

PAGE 1 OF 2

SERVICE LOCATIONS 1. HAYS, KS	WELL PROJECT NO 2	LEASE FUEL "E"	COUNTY/PARISH NESS	STATE KS	CITY/OFFSHORE LOCATION	DATE 7-13-97	OWNER SAME
2.	TICKET TYPE <input checked="" type="checkbox"/> SERVICE <input type="checkbox"/> SALES	NITROGEN JOB? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	CONTRACTOR DISCOVERY DRILLING	RIG NAME/NO "1"	SHIPPED VIA 53293	DELIVERED TO LOANOW	ORDER NO
3.	WELL TYPE 01	WELL CATEGORY 01	JOB PURPOSE 035	WELL PERMIT NO 15135240160000	WELL LOCATION 14-102-26W		
4. REFERRAL LOCATION	INVOICE INSTRUCTIONS						

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	QTY.		U/M		UNIT PRICE	AMOUNT	
		LOC	ACCT	DF								
000-117		1			MILEAGE		100	MI	1	HRS	3.20	320.00
007-012		1			PUMP SERVICE - 1 ST STAGE		4503	FT	6	HRS	2038.00	2038.00
007-161		1			PUMP SERVICE - 2 ND STAGE		1953	FT			1705.00	1705.00
012-315		1			MUD FLUSH		500	GN			75	375.00
012-303		1			CLAYEX II		2	GN			30.50	61.00

ORIGINAL

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MUST BE SIGNED BY CUSTOMER OR CUSTOMER'S AGENT PRIOR TO START OF WORK OR DELIVERY OF GOODS

X **Tom Witz** **AL**

DATE SIGNED: **7-13-97** TIME SIGNED: **0330**

SUB SURFACE SAFETY VALVE WAS <input type="checkbox"/> PULLED & RETURN <input type="checkbox"/> PULLED <input type="checkbox"/> RUN		SURVEY		AGREE	UN-DECIDED	DIS-AGREE	PAGE TOTAL 4499.00
TYPE LOCK	DEPTH	OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?					
BEAN SIZE	SPACERS	WE UNDERSTOOD AND MET YOUR NEEDS?					FROM CONTINUATION PAGE(S)
TYPE OF EQUALIZING SUB.	CASING PRESSURE	OUR SERVICE WAS PERFORMED WITHOUT DELAY?					6851.25
TUBING SIZE	TUBING PRESSURE	WELL DEPTH	WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY?				
TREE CONNECTION	TYPE VALVE		ARE YOU SATISFIED WITH OUR SERVICE? <input type="checkbox"/> YES <input type="checkbox"/> NO				SUB-TOTAL
<input type="checkbox"/> do <input type="checkbox"/> do not require IPC (Instrument Protection). <input type="checkbox"/> Not offered		<input type="checkbox"/> CUSTOMER DID NOT WISH TO RESPOND				APPLICABLE TAXES WILL BE ADDED ON INVOICE	

CUSTOMER ACCEPTANCE OF MATERIALS AND SERVICES The customer hereby acknowledges receipt of the materials and services listed on this ticket.

CUSTOMER OR CUSTOMER'S AGENT (PLEASE PRINT) X Tom Witz	CUSTOMER OR CUSTOMER'S AGENT (SIGNATURE) Tom Witz	HALLIBURTON OPERATOR/ENGINEER Wade Wilson	EMP # 89247	HALLIBURTON APPROVAL
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TICKET CONTINUATION

FIELD COPY

TICKET No. 197108

HALLIBURTON ENERGY SERVICES

51256-76103

CUSTOMER Tom Lutz

WELL Eye1 "E" #2

DATE 7-12-97

PAGE 2 OF 2

FORM 1911 R-10

Flk 68285-189076

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	QTY.		UNIT PRICE	AMOUNT
		LOC	ACCT	DF		QTY.	U/M		
504-280		1			Mid-Con-2	225		13.53	3,044.25
504-136		1			40/60 Pozmix Cement /2% Gel	150		8.14	1,221.00
507-210		1			Flocele Blended	122	lb	1.90	231.80
509-406		1			Calcium Chloride Blended	4		46.90	187.60
509-968		1			Salt Blended W150	750	lb	.17	127.50
507-153		1			CFR-3	402	lb	5.75	2,311.50
500-207		1			SERVICE CHARGE				
						CUBIC FEET	413	1.55	640.15
500-306		1			MILEAGE CHARGE	TOTAL WEIGHT	35,727	LOADED MILES	50
						TON MILES	893.175	1.18	1,053.95

ORIGINAL

No. B 339244

CONTINUATION TOTAL 6,851.25



JOB SUMMARY 4239-1

TICKET #	10108	TICKET DATE	7-13-97
REGION	North America	BDA / STATE	KANSAS
NWA/COUNTRY	MEXICO	COUNTY	NESS
MBU ID / EMP #	B9377	PSL DEPARTMENT	CEMNT
EMPLOYEE NAME	WAYNE WILSON	CUSTOMER REP / PHONE	TOM ALM
LOCATION	HAYS, KS	API / UWI #	1513524016 0000
TICKET AMOUNT	11350.25	WELL TYPE	01
WELL LOCATION	NE / UTCA, KS	DEPARTMENT	CEMNT
LEASE / WELL #	EVEL "E" #2	SEC / TWP / RNG	14-1bs-26w
HES EMP NAME/EMP#/(EXPOSURE HOURS) HRS		JOB PURPOSE CODE	
035			

WILSON	B9377				
ASH	E1609				
FULK	J0763				

ORIGINAL

HES UNIT NUMBERS	R/T MILES	HES UNIT NUMBERS	R/T MILES	HES UNIT NUMBERS	R/T MILES	HES UNIT NUMBERS	R/T MILES
426995	136						
53293m	136						
51252-76103	136						

Form Name _____ Type: _____
 Form Thickness _____ From _____ To _____
 Packer Type _____ Set At _____
 Bottom Hole Temp. _____ Pressure _____
 Misc. Data _____ Total Depth _____

TOOLS AND ACCESSORIES

TYPE AND SIZE	QTY	MAKE
Float Collar		
Float Shoe		
Guide Shoe		
Centralizers		
Bottom Plug		
Top Plug		
Head PC	1	HOWCO
Packer		
Other		

MATERIALS

Treat Fluid	Density	Lb/Gal
Disp. Fluid	Density	Lb/Gal
Prop. Type	Size	Lb.
Prop. Type	Size	Lb.
Acid Type	Gal.	%
Acid Type	Gal.	%
Surfactant	Gal.	In
NE Agent	Gal.	In
Fluid Loss	Gal/Lb	In
Gelling Agent	Gal/Lb	In
Fric. Red.	Gal/Lb	In
Breaker	Gal/Lb	In
Blocking Agent	Gal/Lb	
Perfpac Balls	Qty.	
Other		
Other		
Other		
Other		

DATE	CALLED OUT	ON LOCATION	JOB STARTED	JOB COMPLETED
	7-12	7-12	7-13	7-13
TIME	1730	2100	0230	0530

WELL DATA

	NEW/USED	WEIGHT	SIZE	FROM	TO	MAX ALLOW
Casing	N	11	5 1/2	KB	4499	
Liner						
Liner						
Tbg/D.P.						
Tbg/D.P.						
Open Hole			7 7/8	4499	4524	SHOTS/FT.
Perforations						
Perforations						
Perforations						

HOURS ON LOCATION		OPERATING HOURS		DESCRIPTION OF JOB
DATE	HOURS	DATE	HOURS	
7-12	3	7-12	0	WELL TO REVISED CEMENT CMT 5 1/2" CASING
7-13		7-13		
TOTAL		TOTAL		

HYDRAULIC HORSEPOWER

ORDERED _____ Avail. _____ Used _____

AVERAGE RATES IN BPM

TREATED _____ Disp. _____ Overall _____

CEMENT LEFT IN PIPE

FEET 10.36 Reason LATCH DOWN Baffle

CEMENT DATA

STAGE	SACKS	CEMENT	BULK/SKS	ADDITIVES	YIELD	LBS/GAL
1	150	40/60	B	2% GEL, 10% SALT, 1/2% CR-3, 1/4 # FLOCCLE P/SK	1.30	14.10
2	225	MASON II	B	2% CC, .375 # FLOCCLE P/SK	3.12	11.2
PLUG BATHABLE - MONSENOR WITH 2 ND STAGE CMT.						

Circulating	Displacement	Preflush:	Gal (BBI) 12-10/10	Type MASON/CMT
Breakdown	Maximum	Load & Bkdn:	Gal - BBI 10-C	Pad: BBI - Gal
Average	Frac Gradient	Treatment	Gal - BBI	Disp: BBI - Gal 707.6/47
Shut In: Instant	5 Min	Cement Slurr	Gal (BBI) 34.7 / 125	
	15 Min	Total Volume	Gal - BBI	

Frac Ring #1	Frac Ring #2	Frac Ring #3	Frac Ring #4
THE INFORMATION STATED HEREIN IS CORRECT		CUSTOMER'S REPRESENTATIVE SIGNATURE	



JOB LOG 239-5

TICKET #	102	TICKET DATE	7-13-97
BDA / STATE	KANSAS	COUNTY	NESS
PSL DEPARTMENT	CEMENT		
CUSTOMER REP / PHONE	TOM ALM		
API / UWI #	1513521016 0000		
JOB PURPOSE CODE	035		

REGION	North America	NWAC COUNTRY	MEXICO
MBU ID / EMP #	110101 89377	EMPLOYEE NAME	WAYNE WILSON
LOCATION	WAYS, KS	COMPANY	TOM L512
TICKET AMOUNT	11350.25	WELL TYPE	01
WELL LOCATION	NE / VADG, KS	DEPARTMENT	CEMENT
LEASE / WELL #	EVEL "E" 02	SEC / TWP / RNG	14 lbs 26w

HES EMP NAME/EMP#/(EXPOSURE HOURS)	HRS	HES EMP NAME/EMP#/(EXPOSURE HOURS)	HRS	HES EMP NAME/EMP#/(EXPOSURE HOURS)	HRS	HES EMP NAME/EMP#/(EXPOSURE HOURS)	HRS
Wilson	89377						
A.H.	F1609						
Fulk	J0763						

ORIGINAL

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL/CUM)	PUMPS		PRESS. (psi)		JOB DESCRIPTION / REMARKS
				T	C	Tbg	Csg	
	1730							CALLED OUT
	2100							ON LOCATION - DISCUSS JOB PROCEDURE
	0220							BREAK CIRCULATION
	0230							DROP BALL - SET PACKER SHOES W/ MUD PUMP
1	0303	6	12	✓		200		PUMP 12 BBL MUDFLUSH
	0305	6	10	✓		200		PUMP 10 BBL CUMFLX II PREFLUSH
	0308	6	34.7	✓		200		MAX 1 ST STAGE CEMENT
	0314							WASH OUT PUMP - LEWES - RELEASE 1 ST STAGE PLUG
	0320	7	0	✓		430		DISPLACE PLUG 61.6 H2O - 48 MUD
	0334		109.6			1500		PLUG DOWN - PSE UP LATCH 2 ND PLUG
	0336							RELEASE PSE - FIELD
	0340							DROP DV OPENING PLUG
	0349	5	8	✓		1000		OPEN DV TOOL - BREAK CIRCULATION - MUD PUMP
	0351	6 1/2	10	✓		200		PUMP 10 BBL CUMFLX II PREFLUSH
	0400							PLUG ENTIRE - MOUSEHOLE
	0405	8	125	✓		200		MAX CEMENT - 2 ND STAGE
	0420							WASH OUT PUMP - LEWES - RELEASE 2 ND STAGE PLUG
	0423	6	0	✓		330		DISPLACE PLUG
	0431		47.8			1600		PLUG DOWN - PSE UP CLOSE DV TOOL
	0433							RELEASE PSE - FIELD
								CIRCULATE 10 SKS CEMENT TO PIT
								WASH UP
								BACK UP
	0530							JOB COMPLETE

THANK YOU
WAYNE, DAVE, DUSTY

(913) 625-3531
HAYS, KANSAS 67601



DRILLING MUD REPORT

REPORT NO. 6

ORIGINAL

DATE	<u>7/12/77</u>	DEPTH	<u>4524</u>
APT WELL NO.	STATE	COUNTY	WELL
			ST

OPERATOR <u>Good Tech</u>	CONTRACTOR <u>Pioneer</u>	RIG NO. <u>1</u>
ADDRESS <u>Co.</u>	ADDRESS <u>Big</u>	SPUD DATE <u>7-5-77</u>
REPORT FOR MR. <u>Bar Nelson</u>	REPORT FOR MR. <u>Lynn Olson</u>	SECTION, TOWNSHIP, RANGE <u>14-16-26</u>
WELL NAME AND NO. <u>well "E"</u>	FIELD OR BLOCK NO.	COUNTY AREA <u>Mass</u>
		STATE <u>Ka</u>

Drilling Assembly			Casing		Mud Volume (BBL)		Circulation Data		
Bit Size <u>7 7/8</u>	No. Bits <u>2</u>	Jet Size <u>3/16</u>	Surface <u>8 3/8 230 Ft.</u>	Hole <u>290 250</u>	Pits <u>14</u>	Pump Size x in. <u>6 1/2 x 14</u>	Annular Vel (Ft/Min) DP <u>172</u> DC <u>276</u>		
Drill Pipe Size <u>4 1/2</u>	Type <u>SH</u>	Length	Intermediate Fl.	Total Circulating Volume <u>540</u>		Pump Make, Model	Assumed Eff. <u>70</u>	Circulation Pressure (PSI) <u>900</u>	
Drill Collar Size <u>6</u>	Length	No. Pits <u>3</u>	Production of Liner Fl.	Mud Up Depth <u>3645</u>		Bbl/Stroke <u>115</u>	Stroke/Min. <u>60</u>	Bottoms Up (Min.) <u>42+</u>	
Bit RPM <u>100</u>		Weight on Bit <u>30,000</u>		Mud Type <u>Chemical</u>		Bbl/Min. <u>100 294</u>	Gal/Min.	Total Circ Time (Min.) <u>657</u>	
Last Bit No.		Present Activity <u>957 #3</u>				Elevation			

MUD PROPERTIES	
Time Sample Taken <u>8:40 P.M.</u>	
Depth (ft.) <u>4524</u>	
Weight <input type="checkbox"/> (ppg) <input type="checkbox"/> (lb./cu. ft.) <u>9.3</u>	
Mud Gradient (psi/ft.) <u>1480</u>	
Funnel Viscosity (sec./qt.) API at °F <u>55</u>	
Plastic Viscosity cp at / °F <u>11</u>	
Yield Point (lb./100 sq. ft.) <u>17</u>	
Gel Strength (lb./100 sq. ft.) 10 sec./10 min. <u>1925</u>	
pH <input checked="" type="checkbox"/> Strip <input type="checkbox"/> Meter <u>9.0</u>	
Filtrate API (ml./30 min.) <u>8.0</u>	
API HP-HT Filtrate (ml./30 min.) °F	
Cake Thickness 32nd in. API <input checked="" type="checkbox"/> HP-HT <input type="checkbox"/> <u>1/2</u>	
Alkalinity, Mud (Pm)	
Alkalinity, Filtrate (PI / MI) <u>46.7</u>	
Salt <input type="checkbox"/> Chloride <input type="checkbox"/> <u>2500</u>	
Calcium <input checked="" type="checkbox"/> ppm <input type="checkbox"/> Gyp (ppb) <u>80</u>	
Sand Content (% by Vol.) <u>1.2</u>	
Solids Content (% by Vol.) <u>7.0</u>	
Oil Content (% by Vol.) <u>-</u>	
Water Content (% by Vol.) <u>93.0</u>	
LCM, #/bbl <u>114</u>	
Methylene Blue Capacity <input type="checkbox"/> (metal reed) <input type="checkbox"/> (synth. resin band)	

Mud Used:	
<u>20-Gel</u>	<u>137.00</u>
<u>1-Big</u>	<u>17.76</u>
<u>Washoil</u>	<u>391.45</u>
<u>3-Jobber</u>	<u>42.00</u>
<u>6-Hulls</u>	<u>16.00</u>

Daily Cost <u>3024.21</u>	Cumulative Cost <u>4597.26</u>
------------------------------	-----------------------------------

MUD PROPERTIES SPECIFICATIONS		
WEIGHT <u>9.5</u>	VISCOSITY <u>50+</u>	FILTRATE <u>12.0</u>
BY AUTHORITY: <input type="checkbox"/> OPERATOR'S WRITTEN <input type="checkbox"/> DRILLING CONTRACTOR		
<input type="checkbox"/> OPERATOR'S REPRESENTATIVE <input type="checkbox"/> OTHER		

RECOMMENDED TREATMENT	
<input type="checkbox"/>	
<input type="checkbox"/>	
<input checked="" type="checkbox"/>	<u>4000-Vis 50+ Gel a Pit</u>
<input type="checkbox"/>	<u>1900</u>
<input type="checkbox"/>	<u>2.0 27.2</u>
<input type="checkbox"/>	<u>with 9.5 u de 30</u>

REMARKS:

Short Trip As Needed For 2520g

Fix Hole Clean

Keep Hole "Full"

Pass 2 All 257 water off pits



DATE <u>4/11/87</u>	DEPTH <u>4408</u>			
APT WELL NO.	STATE	COUNTY	WELL	BT

OPERATOR <u>Tom Jutz</u>	CONTRACTOR <u>Discovery</u>	RIG NO. <u>1</u>
ADDRESS <u>Co.</u>	ADDRESS <u>Big</u>	SPUD DATE <u>7/15/87</u>
REPORT FOR MR. <u>Bob Nelson</u>	REPORT FOR MR. <u>Ken Nelson</u>	SECTION, TOWNSHIP, RANGE <u>14-26-26</u>
WELL NAME AND NO. <u>Ever "E"</u>	FIELD OR BLOCK NO.	COUNTY AREA <u>Ness</u>
		STATE <u>KS</u>

Drilling Assembly			Casing		Mud Volume (BBL)		Circulation Data		
Bit Size <u>1 7/8</u>	No. Bits <u>2</u>	Jet Size <u>3/16</u>	Surface <u>2 3/4</u>	Hole <u>2 3/4</u>	Pits <u>250</u>	Pump Size x in. <u>1 1/2 x 14</u>	Annular Vel (Ft/Min) DP <u>122</u> DC <u>226</u>		
Drill Pipe Size <u>4 1/2</u>	Type <u>XH</u>	Length	Intermediate Ft.	Total Circulating Volume <u>535</u>		Pump Make, Model	Assumed Eff.	Circulation Pressure (PSI) <u>900+</u>	
Drill Collar Size <u>6</u>	Length	No. Pits <u>3</u>	Production of Liner Ft.	Mud Up Depth <u>3645</u>		Bbl/Stroke <u>115</u>	Stroke/Min. <u>60</u>	Bottoms Up (Min.) <u>41+</u>	
Bit RPM <u>60</u>	Weight on Bit <u>30,000</u>					Bbl/Min. <u>140294</u>	Gal/Min.	Total Circ Time (Min.) <u>76+</u>	
Last Bit No.	Present Activity <u>Drilling</u>		Mud Type <u>Drilling</u>			Elevation			

Sample from <input checked="" type="checkbox"/> Flowline () Pit		MUD PROPERTIES	
Flowing Temperature F			
Time Sample Taken		<u>7:00 AM</u>	
Depth (ft.)		<u>4408</u>	
Weight <input checked="" type="checkbox"/> (ppg) <input type="checkbox"/> (lb./cu. ft.)		<u>9.4</u>	
Mud Gradient (psi/ft.)		<u>0.489</u>	
Funnel Viscosity (sec./qt.) API at °F		<u>47</u>	
Plastic Viscosity cp at / °F		<u>8</u>	
Yield Point (lb./100 sq. ft.)		<u>13</u>	
Gel Strength (lb./100 sq. ft.) 10 sec./10 min.		<u>16/20</u>	
pH <input checked="" type="checkbox"/> Strip <input type="checkbox"/> Meter		<u>8.5</u>	
Filtrate API (ml./30 min.)		<u>8.0</u>	
API HP-HT Filtrate (ml./30 min.) °F		<u>-</u>	
Cake Thickness 32nd in. API <input checked="" type="checkbox"/> HP-HT <input type="checkbox"/>		<u>1/32</u>	
Alkalinity, Mud (Pm)		<u>15</u>	
Alkalinity, Filtrate (P / Ml)		<u>31.5</u>	
Salt <input type="checkbox"/> Chloride <input type="checkbox"/> Gyp		<u>2000</u>	
Calcium <input type="checkbox"/> ppm <input checked="" type="checkbox"/> Gyp (ppb)		<u>80</u>	
Sand Content (% by Vol.)		<u>1.1</u>	
Solids Content (% by Vol.)		<u>7.7</u>	
Oil Content (% by Vol.)		<u>-</u>	
Water Content (% by Vol.)		<u>92.3</u>	
LCM, #/bbl		<u>1.1</u>	
Methylene Blue Capacity <input type="checkbox"/> (ml/ml mud) <input type="checkbox"/> (equiv. #/bbl. base)		<u>-</u>	

Mud Used:	
Daily Cost	
Cumulative Cost	<u>4295.05</u>
MUD PROPERTIES SPECIFICATIONS	
WEIGHT <u>9.5</u>	VISCOSITY <u>45+</u>
BY AUTHORITY: <input type="checkbox"/> OPERATOR'S WRITTEN <input checked="" type="checkbox"/> DRILLING CONTRACTOR	FILTRATE <u>8.0</u>
<input type="checkbox"/> OPERATOR'S REPRESENTATIVE	<input type="checkbox"/> OTHER
RECOMMENDED TREATMENT	
<input type="checkbox"/>	
<input checked="" type="checkbox"/>	<u>400 lbs = Vis. 50+ Gel</u>
<input checked="" type="checkbox"/>	<u>5.61 M. B.</u>
<input checked="" type="checkbox"/>	<u>WT. 9.5 or less</u>
<input type="checkbox"/>	
<input checked="" type="checkbox"/>	<u>24 Hrs Chemical Treat-</u>
<input checked="" type="checkbox"/>	<u>ment 1-bijonite</u>
<input checked="" type="checkbox"/>	<u>1-Opacite</u>
<input checked="" type="checkbox"/>	<u>3-Soda Ash</u>

REMARKS:

Add 1 1/4 Hrs 7-3-5000 Ash to system. Vis. 50+ Gel & Pit 17 mud

Short Trip Time to DST shop

circ. hole clean

Keep Hole Full

Pump All DST Notes off PITS

(913) 625-3531
HAYS, KANSAS 67601



DRILLING MUD REPORT

REPORT NO. 4

ORIGINAL

DATE	<u>7-10-1997</u>	DEPTH	<u>4236</u>
APT WELL NO.		STATE	
		COUNTY	
		WELL	

OPERATOR <u>Gamutz</u>	CONTRACTOR <u>Discovery</u>	RIG NO. <u>1</u>
ADDRESS <u>cu</u>	ADDRESS <u>2319</u>	SPUD DATE <u>7-5-97</u>
REPORT FOR MR. <u>Ben Nelson</u>	REPORT FOR MR. <u>Gamutz</u>	SECTION, TOWNSHIP, RANGE <u>14-26-26</u>
WELL NAME AND NO. <u>Evel "E"</u>	FIELD OR BLOCK NO.	COUNTY AREA <u>Wes2</u>
		STATE <u>KS</u>

Drilling Assembly			Casing		Mud Volume (BBL)		Circulation Data		
Bit Size <u>7 7/8</u>	No. Bits <u>2</u>	Jet Size <u>3/13</u>	Surface <u>2 7/8</u>	Hole <u>276</u>	Pits <u>200</u>	Pump Size x in. <u>5 1/2 x 14</u>	Annular Vel (F/Min) DP <u>172</u>	Annular Vel (F/Min) DC <u>276</u>	
Drill Pipe Size <u>4 1/2</u>	Type <u>2 H</u>	Length	Intermediate <u>2</u>	Total Circulating Volume <u>426</u>		Pump Make, Model <u>ED</u>	Assumed Eff. <u>70</u>	Circulation Pressure (PSI) <u>900+</u>	
Drill Collar Size <u>6</u>	Length	No. Pits <u>3</u>	Production or Lost <u>0</u>	Mud Up Depth <u>3645</u>		Bbl/Stroke <u>115</u>	Stroke/Min. <u>20</u>	Bottoms Up (Min.) <u>40+</u>	
Bit RPM <u>60</u>	Weight on Bit <u>30000</u>	Present Activity <u>Dry</u>	Mud Type <u>Chemical</u>	Bbl/Min. <u>20</u>	Gal/Min. <u>294</u>	Elevation	Total Circ Time (Min.) <u>70+</u>		
Last Bit No. <u>299</u>									

MUD PROPERTIES	
Time Sample Taken <u>8:30 AM</u>	
Depth (ft.) <u>4234</u>	
Weight <input checked="" type="checkbox"/> (ppg) <input type="checkbox"/> (lb./cu. ft.) <u>9.3</u>	
Mud Gradient (psi/ft.) <u>4.4</u>	
Funnel Viscosity (sec./qt.) API at °F <u>47</u>	
Plastic Viscosity cp at / °F <u>10</u>	
Yield Point (lb./100 sq. ft.) <u>14</u>	
Gel Strength (lb./100 sq. ft.) 10 sec./10 min. <u>172</u>	
pH <input checked="" type="checkbox"/> Strip <input type="checkbox"/> Meter <u>9.5</u>	
Filtrate API (ml./30 min.) <u>8.0</u>	
API HP-HT Filtrate (ml./30 min.) °F	
Cake Thickness 32nd in. API <input checked="" type="checkbox"/> HP-HT <input type="checkbox"/> <u>1.9</u>	
Alkalinity, Mud (Pm) <u>1.8</u>	
Alkalinity, Filtrate (P/ M) <u>3.1</u>	
Salt <input checked="" type="checkbox"/> Chloride <input type="checkbox"/> <u>2.000</u>	
Calcium <input checked="" type="checkbox"/> ppm <input type="checkbox"/> Gyp (ppb) <u>80</u>	
Sand Content (% by Vol.) <u>4.1</u>	
Solids Content (% by Vol.) <u>7.5</u>	
Oil Content (% by Vol.) <u>-</u>	
Water Content (% by Vol.) <u>78.5</u>	
LCM, #bbl <u>1.1</u>	
Methylene Blue Capacity <input type="checkbox"/> (mud) <input type="checkbox"/> (equiv. 60bbl. bent.)	

Mud Used:	
<u>30.6 gal</u>	<u>2025.50</u>
<u>2-segcrete</u>	<u>29.20</u>
<u>2-bisnite</u>	<u>2515.2</u>
<u>5-saludex</u>	<u>70.00</u>

Daily Cost	Cumulative Cost
<u>390.72</u>	<u>4792.05</u>

MUD PROPERTIES SPECIFICATIONS		
WEIGHT <u>9.5</u>	VISCOSITY <u>45 DST</u>	FILTRATE <u>12.0</u>

BY AUTHORITY: OPERATOR'S WRITTEN DRILLING CONTRACTOR
 OPERATOR'S REPRESENTATIVE OTHER

- RECOMMENDED TREATMENT
- - 400 lbs. Vis. 45+ DST
 - 400 lbs. Vis. 50+ seg / PT mud
 - 2.0 M only if needed
 - WT. 9.5 to 2.5
 - keep section High
 - 24 Hr. chemical treatment

REMARKS:
30 bbls. Pit mud, 50+ bbls water
Vis. 45+ seg
Add Slurry to System
4-segcrete
1-gauze
1-bisnite
Short Trip Prior to DST adog
Drill Hole - Clean
Keep Hole Full
Pump All DST water off pits

(913) 625-3531
HAYS, KANSAS 67601



ORIGINAL

DRILLING MUD REPORT

REPORT NO. 3

DATE	<u>7-9</u>	19 <u>97</u>	DEPTH	<u>3670</u>
APT WELL NO.		STATE	COUNTY	WELL
				BT

OPERATOR <u>Tom Jutza</u>	CONTRACTOR <u>Discovery</u>	RIG NO. <u>1</u>
ADDRESS <u>Co.</u>	ADDRESS <u>Big T</u>	SPUD DATE <u>7.5-97</u>
REPORT FOR MR. <u>Tom Nelson</u>	REPORT FOR MR. <u>Tom Allen</u>	SECTION, TOWNSHIP, RANGE <u>14-16-26</u>
WELL NAME AND NO. <u>Evel "E"</u>	FIELD OR BLOCK NO.	COUNTY AREA <u>Ness</u>
		STATE <u>Ks.</u>

Drilling Assembly			Casing		Mud Volume (BBL)		Circulation Data		
Bit Size <u>7 1/8</u>	No. Bits <u>2</u>	Jet Size <u>3/13</u>	Surface <u>8 1/8 230 Ft.</u>	Hole <u>245 200</u>	Pits <u>3 1/2 x 14</u>	Pump Size x in.	Annular Vel (Ft/Min) DP <u>172</u> DC <u>276</u>		
Drill Pipe Size <u>4 1/2</u>	Type <u>2 H</u>	Length	Intermediate Fl.	Total Circulating Volume <u>445</u>	Pump Make, Model	Assumed Eff. <u>70</u>	Circulation Pressure (PSI) <u>8300+</u>		
Drill Collar Size <u>6</u>	Length	No. Pits <u>3</u>	Production of Liner Fl.	Mud Up Depth <u>3645</u>	Bbl/Stroke	Stroke/Min. <u>20</u>	Bottoms Up (Min.) <u>35+</u>		
Bit RPM <u>60</u>	Weight on Bit <u>20000</u>	Present Activity <u>Dry</u>	Mud Type <u>Chemical Drilling</u>	Bbl/Min. <u>20</u>	Gal/Min. <u>20</u>	Elevation	Total Circ Time (Min.) <u>64+</u>		
Last Bit No. <u>230</u>									

Sample from <input checked="" type="checkbox"/> Flowline () Pit		MUD PROPERTIES	
Flowing Temperature			
Time Sample Taken	<u>4:30 A.M.</u>		
Depth (ft.)	<u>3670</u>		
Weight <input checked="" type="checkbox"/> (ppg) <input type="checkbox"/> (lb./cu. ft.)	<u>8.8</u>		
Mud Gradient (psi/ft.)	<u>0.58</u>		
Funnel Viscosity (sec./qt.) API at °F	<u>45</u>		
Plastic Viscosity cp at / °F	<u>6</u>		
Yield Point (lb./100 sq. ft.)	<u>10</u>		
Gel Strength (lb./100 sq. ft.) 10 sec./10 min.	<u>11/14</u>	<u>1</u>	<u>1</u>
pH <input checked="" type="checkbox"/> Strip <input type="checkbox"/> Meter	<u>10.5</u>		
Filtrate API (ml./30 min.)	<u>12.0</u>		
API HP-HT Filtrate (ml/30 min.) °F	<u>-</u>		
Cake Thickness 32nd in. API <input checked="" type="checkbox"/> HP-HT <input type="checkbox"/>	<u>1/32</u>		
Alkalinity, Mud (Pm)			
Alkalinity, Filtrate (P/ Ml)	<u>19/39</u>	<u>1</u>	<u>1</u>
Salt <input checked="" type="checkbox"/> Chloride <input type="checkbox"/> ppm	<u>3000</u>		
Calcium <input checked="" type="checkbox"/> ppm <input type="checkbox"/> Gyp (ppb)	<u>40</u>		
Sand Content (% by Vol.)	<u>71</u>		
Solids Content (% by Vol.)	<u>3.4</u>		
Oil Content (% by Vol.)	<u>-</u>		
Water Content (% by Vol.)	<u>96.6</u>		
LCM, #/bbl	<u>11/2</u>		
Methylene Blue Capacity <input type="checkbox"/> (ml/ml mud) <input type="checkbox"/> (equiv. 0.02% bent.)	<u>-</u>		

MUD PROPERTIES SPECIFICATIONS	
WEIGHT	<u>9.5</u>
VISCOSITY	<u>45+</u>
FILTRATE	<u>12cc-</u>
BY AUTHORITY: <input type="checkbox"/> OPERATOR'S WRITTEN <input type="checkbox"/> DRILLING CONTRACTOR	
<input type="checkbox"/> OPERATOR'S REPRESENTATIVE <input type="checkbox"/> OTHER	
RECOMMENDED TREATMENT	
<input type="checkbox"/> <u>50% Gouly = Vis. 40+ Gel at Pit + Mud</u> <input type="checkbox"/> <u>8.0 lb. M. Only if Needs</u> <input type="checkbox"/> <u>WT. 9.5 & Less</u> <input type="checkbox"/> <u>At approx. 4250'</u> <input type="checkbox"/> <u>Add = Permox 80+ bbl.</u> <input type="checkbox"/> <u>Fresh Water Mix =</u> <u>25+ Gel</u>	

REMARKS:

Reserve pit Chlorides 13,000 Calcium 950

Get Hole 1 - Exhaust 2 - High Nit 5 - Soda Ash Adding 1 - Drispaal Vis. 45+ & T.D. Gel

Short Trip Prior to DST along line. Hole clean

Keep Hole Full

Dump All 225 Water out pits

Loss Fluid 2309' 2241'

(913) 625-3531
HAYS, KANSAS 67601



ORIGINAL

DRILLING MUD REPORT

REPORT NO. 1

DATE <u>7/15</u>	TO <u>97</u>	DEPTH
APT WELL NO.	STATE	COUNTY
		WELL
		BT

OPERATOR <u>Tom Futz</u>	CONTRACTOR <u>Discovery</u>	RIG NO. <u>1</u>
ADDRESS <u>CO</u>	ADDRESS <u>Big</u>	SPUD DATE <u>7-5-97</u>
REPORT FOR MR. <u>Born Nelson</u>	REPORT FOR MR. <u>Tom Alm</u>	SECTION, TOWNSHIP, RANGE
WELL NAME AND NO.	FIELD OR BLOCK NO.	COUNTY AREA <u>Ness</u>
		STATE <u>KS</u>

Drilling Assembly			Casing		Mud Volume (BBL)		Circulation Data		
Bit Size <u>7 7/8</u>	No. Bits <u>2</u>	Jet Size <u>3 1/3</u>	Surface <u>3 7/8</u>	Fl.	Hole	Pits	Pump Size x in. <u>5 1/2 x 14</u>	Annular Vel (Ft/Min) DP <u>172</u> DC <u>276</u>	
Drill Pipe Size <u>4 1/2</u>	Type <u>XH</u>	Length	Intermediate <u>3 7/8</u>	Fl.	Total Circulating Volume		Pump Make, Model	Assumed Eff. <u>90</u>	Circulation Pressure (PSI)
Drill Collar Size <u>6</u>	Length	No. Pits <u>2</u>	Production of Liner <u>3 7/8</u>	Fl.	Mud Up Depth <u>36-9700</u>	Bbl/Stroke <u>215</u>	Stroke/Min. <u>60</u>	Bottoms Up (Min.)	
Bit RPM <u>60</u>	Weight on Bit <u>30000</u>		Mud Type <u>Chemical Disposal</u>		Bbl/Min. <u>70</u>	Gal/Min. <u>394</u>	Total Circ Time (Min.)		
Last Bit No.	Present Activity				Elevation				

Sample from <input type="checkbox"/> Flowline () Pit		MUD PROPERTIES	
Flowing Temperature F			
Time Sample Taken			
Depth (ft.)			
Weight <input type="checkbox"/> (ppg) <input type="checkbox"/> (lb./cu. ft.)			
Mud Gradient (psi/ft.)			
Funnel Viscosity (sec./qt.) API at °F			
Plastic Viscosity cp at / °F			
Yield Point (lb./100 sq. ft.)			
Gel Strength (lb./100 sq. ft.) 10 sec./10 min.			
pH <input type="checkbox"/> Strip <input type="checkbox"/> Meter			
Filtrate API (ml./30 min.)			
API HP-HT Filtrate (ml/30 min.) °F			
Cake Thickness 32nd in. API <input type="checkbox"/> HP - HT <input type="checkbox"/>			
Alkalinity, Mud (Pm)			
Alkalinity, Filtrate (Pl / Ml)			
Salt <input type="checkbox"/> ppm Chloride <input type="checkbox"/> ppm			
Calcium <input type="checkbox"/> ppm <input type="checkbox"/> Gyp (ppb)			
Sand Content (% by Vol.)			
Solids Content (% by Vol.) <u>No Beads to</u>			
Oil Content (% by Vol.) <u>Displace At</u>			
Water Content (% by Vol.) <u>Approx. 26 to 3700</u>			
LCM, #/bbl			
Methylene Blue Capacity <input type="checkbox"/> (initial mud) <input type="checkbox"/> (equiv. 800cc. bank)			

Mud Used:	
Daily Cost	Cumulative Cost

MUD PROPERTIES SPECIFICATIONS		
WEIGHT <u>9.5-</u>	VISCOSITY <u>175+</u>	FILTRATE <u>1200-</u>
BY AUTHORITY: <input type="checkbox"/> OPERATOR'S WRITTEN <input type="checkbox"/> DRILLING CONTRACTOR		
<input type="checkbox"/> OPERATOR'S REPRESENTATIVE <input type="checkbox"/> OTHER		

- RECOMMENDED TREATMENT
- Under Surface Control
 - Int. 9.5 or less
 - Flush Hole At 2450
 - Premix 80 bbls. water
 - 10-bbl. 1-lime, 10-Hull
 - Sweep Hole/only

REMARKS: As needed for tight cementic fill from tank full of the following premix = 80 bbls. water
Mix = 20-bbl
2-gal. ash
1-lime
1-caustic
1-lime cap of Disposal
Ball each tank 45 min. before adding to free tanks.
Have spare mixture in premix tank for a stand by
"Keep Hole Full"

Please call Tom Futz when beads to displace

P. O. Box 763
Hays, Kansas 67601



Discovery Drilling

Office 913/623-2920
Cellular 913/635-1511
Rig 913/635-1201

ORIGINAL

Pipe and Tubing Tally Book

DATE July 5, 1997 COMPANY Thomas C. Lutz LEASE Evel "E" Well No. 2

SIZE 8 5/8 WEIGHT 20# MAKE _____ GRADE _____ RANGE _____

THREAD 8 RS COLLAR LENGTH _____ CONDITION New TRANSFER NOS. _____ OVERALL TALLY _____
THREADS OFF TALLY _____

Joint No.	Feet	Hnd	Joint No.	Feet	Hnd	Joint No.	Feet	Hnd	Joint No.	Feet	Hnd	Joint No.	Feet	Hnd	Joint No.	Feet	Hnd	Joint No.	Feet	Hnd	Joint No.	Feet	Hnd			
1	44	22	21			41			61			81			101			121			141					
2	44	00	22			42			62			82			102			122			142					
3	43	46	23			43			63			83			103			123			143					
4	44	28	24			44			64			84			104			124			144					
5	44	43	25			45			65			85			105			125			145					
6			26			46			66			86			106			126			146					
7			27			47			67			87			107			127			147					
8			28			48			68			88			108			128			148					
9			29			49			69			89			109			129			149					
10			30			50			70			90			110			130			150					
11			31			51			71			91			111			131			151					
12			32			52			72			92			112			132			152					
13			33			53			73			93			113			133			153					
14			34			54			74			94			114			134			154					
15			35			55			75			95			115			135			155					
16			36			56			76			96			116			136			156					
17			37			57			77			97			117			137			157					
18			38			58			78			98			118			138			158					
19			39			59			79			99			119			139			159					
20			40			60			80			100			120			140			160					
220			31																							

+LS 10 00

Totals

Drillers TD 230.39 Loggers TD _____

No. Jts. Run 5 Size 8 5/8 Wt. 20# Tested 1500#

Cent@ _____

Basket@ _____ D.V. Tool@ _____ Port Collar@ _____

Cemented By Applied Cementing SKs. Type Cement 165 lbs 60/40 P02 20% Gel & 3% CC

Flush _____ (Did Circ) ✓

Jts. To Be Left Out None

Shoe Jt. 44.22 Pipe Set@ 230' Off Bottom 2'

Plug Down 7:15 A.M. P.M. 7:59 Rig Release@ _____ A.M. P.M. / /

Job By Alm

Pipe Left On Location None Jts. Talley _____ Threads On _____

ALLIED CEMENTING CO., INC.

5725

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

ORIGINAL

SERVICE POINT:
Russell

DATE <i>7-5-97</i>	SEC <i>14</i>	TWP. <i>16</i>	RANGE <i>26</i>	CALLED OUT <i>2:30 pm</i>	ON LOCATION <i>5:30 pm</i>	JOB START <i>6:45 pm</i>	JOB FINISH <i>7:45 pm</i>
LEASE <i>Euel</i>	WELL# <i>E-2</i>	LOCATION <i>1E 24</i>			COUNTY <i>Neosho</i>	STATE <i>Kr</i>	

OLD OR NEW (Circle one)

CONTRACTOR *Dickinson*

TYPE OF JOB *SURFACE*

HOLE SIZE *12 1/2* T.D.

CASING SIZE *12 1/2* DEPTH *230*

TUBING SIZE DEPTH

DRILL PIPE DEPTH

TOOL DEPTH

PRES. MAX MINIMUM

MEAS. LINE SHOE JOINT

CEMENT LEFT IN CSG. *15'*

PERFS.

OWNER _____ CEMENT

AMOUNT ORDERED *165 sks 6 1/2" 3-7*

COMMON	_____	@	_____
POZMIX	_____	@	_____
GEL	_____	@	_____
CHLORIDE	_____	@	_____
	_____	@	_____
	_____	@	_____
	_____	@	_____
	_____	@	_____
	_____	@	_____
HANDLING	_____	@	_____
MILEAGE	_____	@	_____

EQUIPMENT

PUMP TRUCK CEMENTER *Bill*

153 HELPER *Paul*

BULK TRUCK

DRIVER

BULK TRUCK

DRIVER *Dubin*

TOTAL _____

REMARKS:

Run 5 hrs 30 min etc 230

Cement w/ 165 sks cem

pump plug w/ 13.7 bbls

Cem did cin ✓

SERVICE

DEPTH OF JOB	_____
PUMP TRUCK CHARGE	_____
EXTRA FOOTAGE	_____ @ _____
MILEAGE	_____ @ _____
PLUG <i>wood</i>	_____ @ _____
	_____ @ _____
	_____ @ _____

TOTAL _____

CHARGE TO: *Thomas C Lutz*

STREET _____

CITY _____ STATE _____ ZIP _____

FLOAT EQUIPMENT

	_____	@	_____
	_____	@	_____
	_____	@	_____
	_____	@	_____
	_____	@	_____

TOTAL _____



PIPE TALLY

DATE DEL. 7-5 1977

CHARGE TO Tom Lutz

LEASE EVLC WELL NO. _____

DESCRIPTION Oct 25 8 7/8 20" STC R3

TALLIED BY _____

RELEASE NO. _____

	FEET	INCH	FEET	INCH	FEET	INCH	FEET	INCH	FEET	INCH	FEET	INCH
1	44	35										
2	44	30										
3	43	15										
4	44	60										
5	44	70										
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												
1	221	90										

2 THE ABOVE 5 JOINTS RECEIVED IN GOOD ORDER

3

4 BY _____

5 ORIGINAL TO REMAIN IN BOOK — DUPLICATE TO BE ATTACHED TO CUSTOMER'S IN-

6 VOICE — TRIPLICATE TO BE GIVEN TO CUSTOMER'S REPRESENTATIVE AT TIME OF DELIVERY.

WELL NAME:
COMPANY:
LOCATION:

Evel "E" #2
Thomas C Lutz
14-16S-26W
Ness County Kansas

DATE:

07/14/97

ORIGINAL

15-135-24016

TRILOBITE TESTING L.L.C.

OPERATOR : Thomas C. Lutz
 WELL NAME: Evel "E" #2
 LOCATION : 14-16S-26W Ness KS
 INTERVAL : 4386.00 To 4407.00 ft

DATE 7/11/97
 KB 2575.00 ft TICKET NO: 10175 DST #1
 GR 2567.00 ft FORMATION: Fort Scott
 TD 4407.00 ft TEST TYPE: CONV

RECORDER DATA

Mins		Field	1	2	3	4	TIME DATA-----
PF 45	Rec.	13754	13754	13248			PF Fr. 0125 to 0210 hr
SI 45	Range(Psi)	4000.0	4000.0	0.0	0.0	0.0	IS Fr. 0210 to 0255 hr
SF 45	Clock(hrs)	12 hr	12 hr	12 hr			SF Fr. 0255 to 0340 hr
FS 45	Depth(ft)	4388.0	4388.0	4404.0	0.0	0.0	FS Fr. 0340 to 0425 hr

	Field	1	2	3	4	
A. Init Hydro	2188.0	2196.0	0.0	0.0	0.0	T STARTED 0015 hr
B. First Flow	39.0	42.0	0.0	0.0	0.0	T ON BOTM 0115 hr
B1. Final Flow	187.0	191.0	0.0	0.0	0.0	T OPEN 0125 hr
C. In Shut-in	620.0	628.0	0.0	0.0	0.0	T PULLED 0425 hr
D. Init Flow	216.0	2259.0	0.0	0.0	0.0	T OUT 0710 hr
E. Final Flow	285.0	290.0	0.0	0.0	0.0	
F. Fl Shut-in	531.0	541.0	0.0	0.0	0.0	
G. Final Hydro	2137.0	2174.0	0.0	0.0	0.0	
Inside/Outside	I	I	O			

TOOL DATA-----

Tool Wt.	800.00 lbs
Wt Set On Packer	20000.00 lbs
Wt Pulled Loose	60000.00 lbs
Initial Str Wt	42000.00 lbs
Unseated Str Wt	43000.00 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	30.00 ft
D.P. Length	4336.00 ft

RECOVERY

Tot Fluid 816.00 ft of 30.00 ft in DC and 786.00 ft in DP
 630.00 ft of Clean Gassy Oil
 0.00 ft of 50%gas 50%oil
 186.00 ft of Heavy Mud Cut Gassy Oil
 0.00 ft of 10%mud 40%gas 50%oil
 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 42.00

BLOW DESCRIPTION

Initial Flow:
 Strong blow, bottom of bucket in 1 min

Initial Shut In:
 Bled off blow, blow came back, built to 12" Gas To Surface

Final Flow:
 Strong blow, bottom of bucket in 4 min

Final Shut In:
 Bled off blow, blow came back, built to 10"

SAMPLES:

SENT TO:

MUD DATA-----

Mud Type	Chemical
Weight	9.30 lb/c
Vis.	47.00 S/L
W.L.	8.00 in3
F.C.	0.00 in
Mud Drop	
Amt. of fill	0.00 ft
Btm. H. Temp.	114.00 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	Dan Bangle
Co. Rep.	Ron Nelson
Contr.	Discovery
Rig #	1
Unit #	
Pump T.	

Test Successful: Y

Operator.....: Thomas C Lutz
Well Name.....: Evel "E" #2
DST Number.....: 1

Location.: 14-16S-26W Ness KS
Test Type: CONV
Formation: Fort Scott

Recorder No...: 13754
Recorder Depth: 4388
Test Interval.: 4386-4407

RESERVOIR CALCULATIONS: Fluid calculations based on shut-in #2

RESERVOIR PARAMETERS USED:

Net Pay.....	4.00 ft
Porosity.....	14.00 %
Bottom Hole Temp.....	114.00 F
Specific Gravity.....	26.000
API Gravity.....	42.00
Compressibility.....	0.000005 /psi
Viscosity.....	3.3130 cp
Total Recovery.....	816.00 ft
Total Flowing Time.....	0.90 min.
Flow Rate.....	90.60 bbls/d
Final Flowing Pressure.....	290.00 psi
Horner Slope.....	208.1020 psi/cycle
Extrapolated Pressure.....	640.29 psi
Formation Volume Factor.....	1.03 Reservoir/Surface
Well Bore Radius.....	3.94 in

RESULTS:

Effective Permeability.....	60.684011 md
Flow Capacity.....	242.7360 md.ft
Transmissibility.....	73.2677 md.ft/cp
Skin Factor.....	-1.4620
Radius of Investigation.....	18.16858 ft
Damage Ratio.....	0.5699
Productivity Index.....	0.2586 bbls/psi.d
Productivity Index W/O Damage..	0.1474 bbls/psi.d

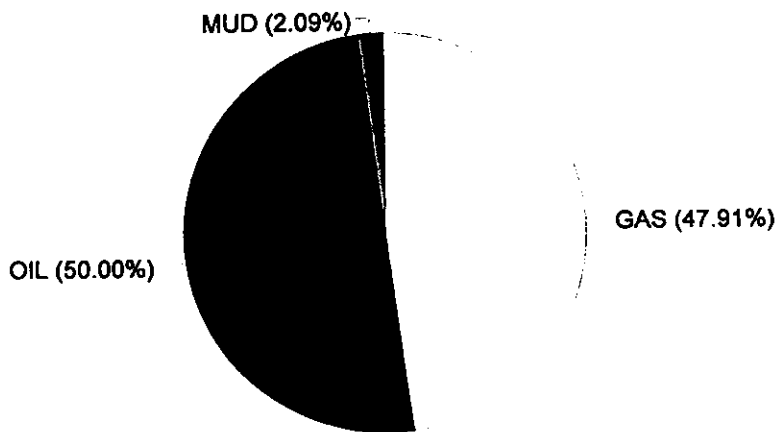
CALCULATED RECOVERY ANALYSIS

DST 1

TICKET 10175

SAMPLE		TOTAL FEET	GAS		OIL		WATER		MUD	
			%	FEET	%	FEET	%	FEET	%	FEET
DRILL	1	630	50	315	50	315		0		0
PIPE	2	156	40	62.4	50	78		0	10	15.6
	3			0		0		0		0
	4			0		0		0		0
	5			0		0		0		0
	6			0		0		0		0
WEIGHT	1			0		0		0		0
PIPE	2			0		0		0		0
	3			0		0		0		0
	4			0		0		0		0
DRILL	1	30	40	12	50	15		0	10	3
COLLARS	2			0		0		0		0
	3			0		0		0		0
	4			0		0		0		0
	5			0		0		0		0
TOTAL		816		389.4		408		0		18.6

			HRS OPEN		BBL/DAY
BBL OIL=	5.66181	*	1.5	=	90.6
BBL WATER=	0	*		=	0
BBL MUD=	0.236502				
BBL GAS =	5.425308				

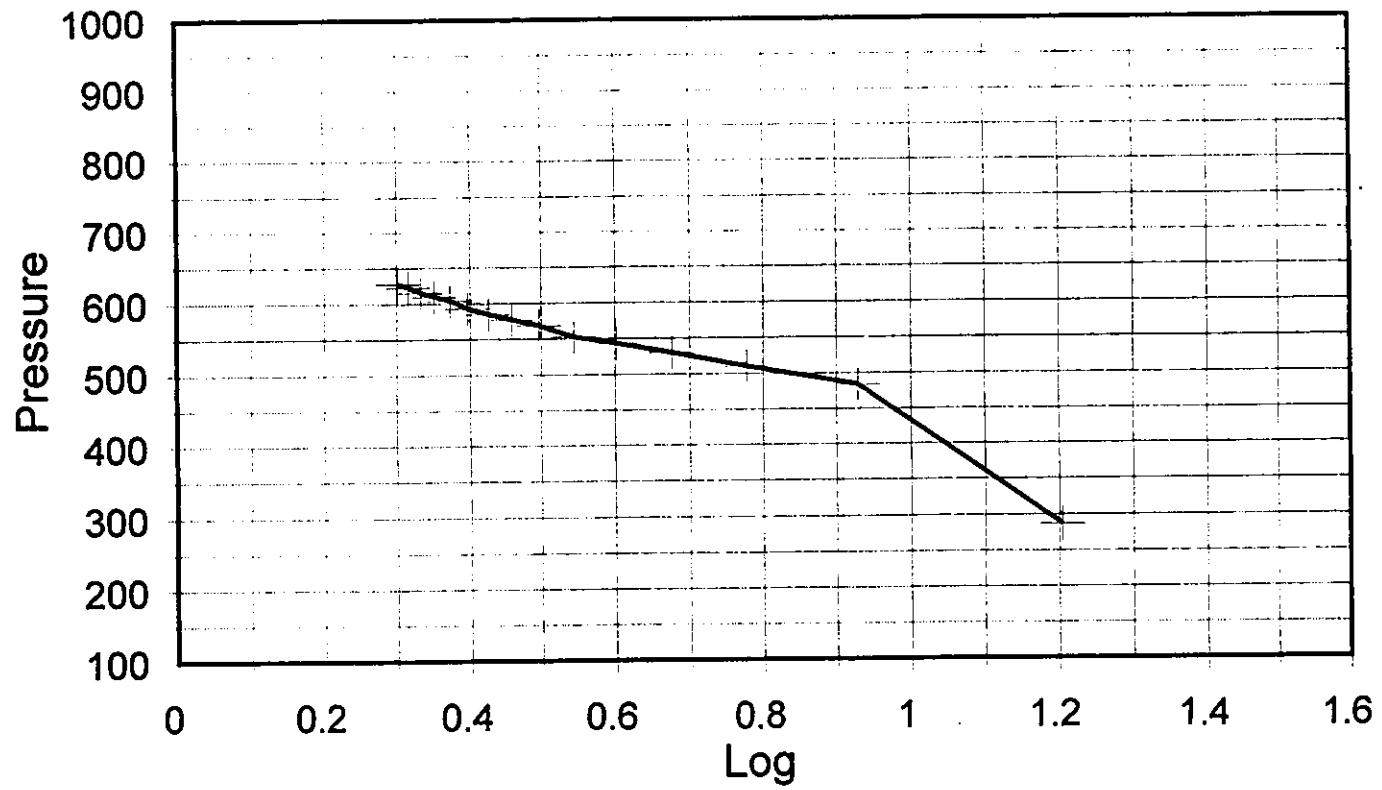


Time	Pressure PSIG	Log Horn T	◇ Pressure	(T+dT)/dT	
***Start Shutin 1	3	287	1.204	287.0	16.0
	6	484	0.929	197.0	8.5
	9	510	0.778	26.0	6.0
	12	530	0.677	20.0	4.8
	15	543	0.602	13.0	4.0
	18	553	0.544	10.0	3.5
	21	568	0.497	15.0	3.1
	24	577	0.459	9.0	2.9
	27	585	0.426	8.0	2.7
	30	593	0.398	8.0	2.5
	33	604	0.374	11.0	2.4
	36	610	0.352	6.0	2.3
	39	616	0.333	6.0	2.2
	42	623	0.316	7.0	2.1
	45	628	0.301	5.0	2.0

	Time	Pressure PSIG	Log Horn T	◇ Pressure	(T+dT)/dT
***Start Shutin 2	3	402	1.491	402.0	31.0
	6	446	1.204	44.0	16.0
	9	460	1.041	14.0	11.0
	12	474	0.929	14.0	8.5
	15	483	0.845	9.0	7.0
	18	492	0.778	9.0	6.0
	21	498	0.723	6.0	5.3
	24	504	0.677	6.0	4.8
	27	511	0.637	7.0	4.3
	30	515	0.602	4.0	4.0
	33	522	0.571	7.0	3.7
	36	526	0.544	4.0	3.5
	39	530	0.520	4.0	3.3
	42	536	0.497	6.0	3.1
	45	541	0.477	5.0	3.0

Horner Plot: Shut-in #1

P * 720.01 Slope 305.663



Horner Plot: Shut-in #2

$P^* 640.29$ Slope 208.102

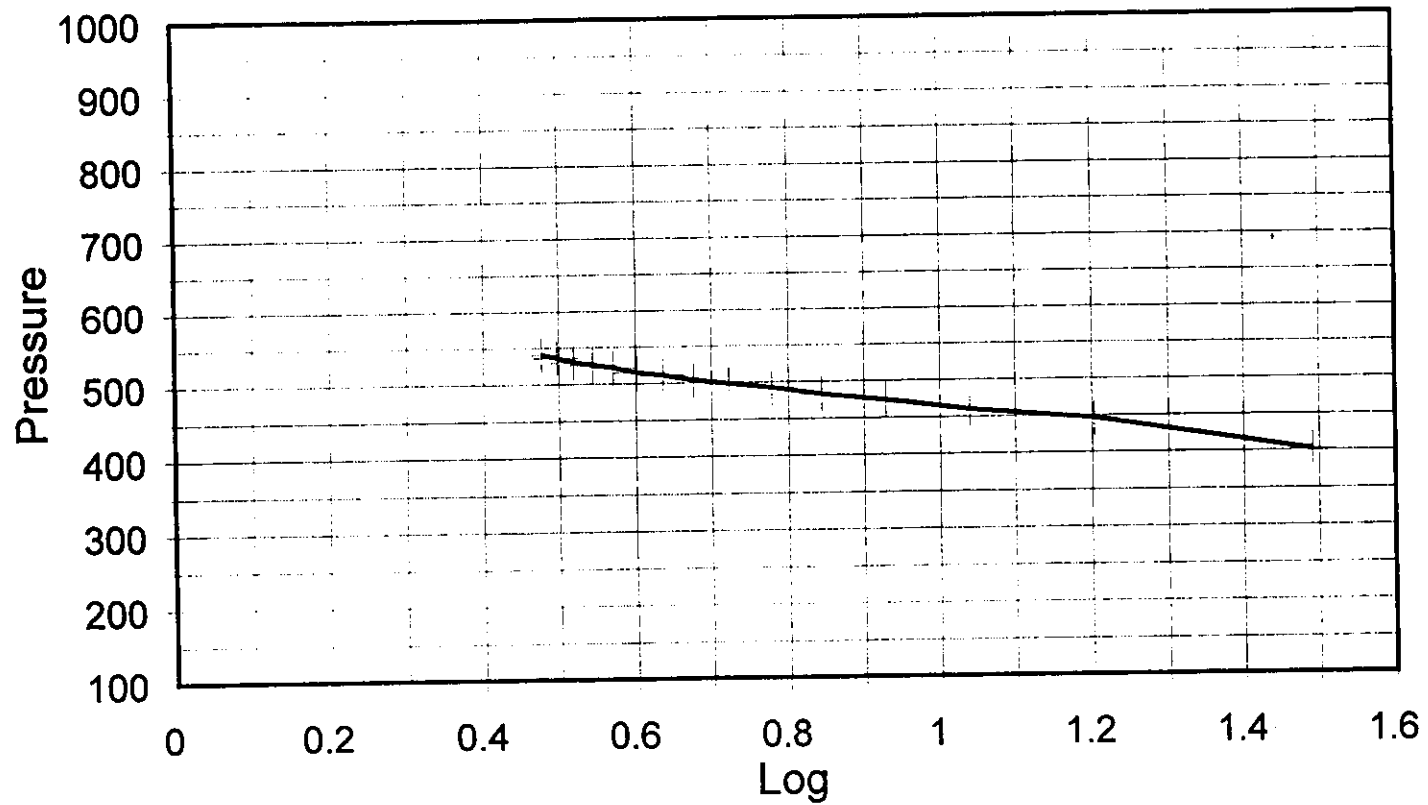
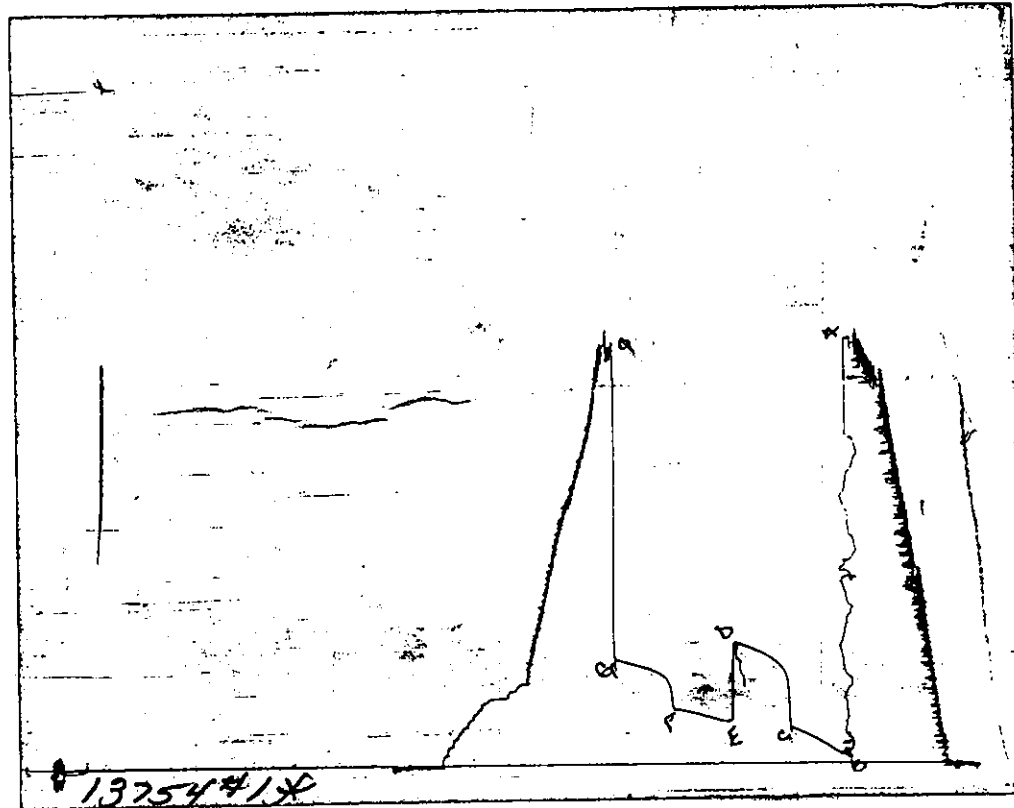


CHART PAGE



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

TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Test Ticket

No 10175

Well Name & No. <u>Fuel "E" #2</u>	Test No. <u>1</u>	Date <u>7-11-97</u>
Company <u>Thomas C. HUTZ</u>	Zone Tested <u>FT SCOTT</u>	
Address <u>P.O. Drawer 3067, Lawrence, Ks. 66046</u>		Elevation <u>2575</u> KB <u>2567</u> GL
Co. Rep / Geo. <u>Ron Nelson</u>	Cont. <u>Discovery #1</u>	Est. Ft. of Pay <u>4</u> Por. <u>14</u> %
Location: Sec. <u>14</u> Twp. <u>16</u> Rge. <u>26</u> Co. <u>Ness</u> State <u>Ks.</u>	No. of Copies _____ Distribution Sheet (Y, N) _____ Turnkey (Y, N) _____ Evaluation (Y, N) <u>Y</u>	

Interval Tested <u>4386 - 4407</u>	Initial Str Wt/Lbs. <u>47,000</u>	Unseated Str Wt/Lbs. <u>48,000</u>
Anchor Length <u>21</u>	Wt. Set Lbs. <u>20,000</u>	Wt. Pulled Loose/Lbs. <u>60,000</u>
Top Packer Depth <u>4381</u>	Tool Weight <u>800</u>	
Bottom Packer Depth <u>4386</u>	Hole Size — <u>7 7/8"</u>	Rubber Size — <u>6 3/4"</u>
Total Depth <u>4407</u>	Wt. Pipe Run _____	Drill Collar Run <u>30</u>
Mud Wt. <u>9.3</u> LCM _____ Vis. <u>47</u> WL <u>8</u>	Drill Pipe Size <u>4.5 X H</u>	Ft. Run <u>4336</u>

Blow Description IF Strong - B.O.B. in 1 min.
ISI - Bled off blow - blow came back - built to 12" GTS
FF - Strong - B.O.B. in 4 min.
EIS - Bled off blow - blow came back - built to 10"

Recovery — Total Feet <u>816</u>	GIP <u>GTS</u>	Ft. in DC <u>30</u>	Ft. in DP _____
Rec. <u>630</u> Feet Of <u>CGSYO</u>	<u>50</u> %gas <u>50</u> %oil	%water _____	%mud _____
Rec. <u>186</u> Feet Of <u>HMC GSYO</u>	<u>40</u> %gas <u>50</u> %oil	%water _____	<u>10</u> %mud
Rec. _____ Feet Of _____	%gas _____ %oil _____	%water _____	%mud _____
Rec. _____ Feet Of _____	%gas _____ %oil _____	%water _____	%mud _____
Rec. _____ Feet Of _____	%gas _____ %oil _____	%water _____	%mud _____

BHT 114 °F Gravity _____ *API D@ _____ °F Corrected Gravity 42 *API _____

RW _____ @ _____ °F Chlorides _____ ppm Recovery Chlorides 2,000 ppm System _____

(A) Initial Hydrostatic Mud <u>2188</u> PSI	Recorder No. <u>13754</u>	T-Started <u>00:15</u>
(B) First Initial Flow Pressure <u>39</u> PSI	(depth) <u>4388</u>	T-Open <u>01:25</u>
(C) First Final Flow Pressure <u>187</u> PSI	Recorder No. <u>13248</u>	T-Pulled <u>04:25</u>
(D) Initial Shut-in Pressure <u>620</u> PSI	(depth) <u>4404</u>	T-Out <u>07:10</u>
(E) Second Initial Flow Pressure <u>216</u> PSI	Recorder No. _____	
(F) Second Final Flow Pressure <u>285</u> PSI	(depth) _____	
(G) Final Shut-in Pressure <u>531</u> PSI	Initial Opening <u>45</u>	Test _____
(H) Final Hydrostatic Mud <u>2137</u> PSI	Initial Shut-in <u>45</u>	Jars _____
	Final Flow <u>45</u>	Safety Joint _____
	Final Shut-in <u>45</u>	Straddle _____

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Approved By _____

Other _____

TRILOBITE TESTING L.L.C.

OPERATOR : Thomas C Lutz
 WELL NAME: Evel "E" #2
 LOCATION : 14-16S-26W Ness KS
 INTERVAL : 4502.00 To 4515.00 ft

DATE 7/11/97

KB 2575.00 ft TICKET NO: 10401 DST #2
 GR 2567.00 ft FORMATION: Mississippi
 TD 4515.00 ft TEST TYPE: CONV

RECORDER DATA

Mins	Field	1	2	3	4	TIME DATA-----
PF 45 Rec.	13754	13754	13248			PF Fr. 2045 to 2130 hr
SI 45 Range(Psi)	4000.0	4000.0	4500.0	0.0	0.0	IS Fr. 2130 to 2215 hr
SF 45 Clock(hrs)	12 hr	12 hr	12 hr			SF Fr. 2215 to 2300 hr
FS 45 Depth(ft)	4504.0	4504.0	4512.0	0.0	0.0	FS Fr. 2300 to 2345 hr

	Field	1	2	3	4	
A. Init Hydro	2238.0	2290.0	0.0	0.0	0.0	T STARTED 1930 hr
B. First Flow	19.0	22.0	0.0	0.0	0.0	T ON BOTM 2030 hr
B1. Final Flow	29.0	32.0	0.0	0.0	0.0	T OPEN 2045 hr
C. In Shut-in	1036.0	1049.0	0.0	0.0	0.0	T PULLED 2345 hr
D. Init Flow	39.0	64.0	0.0	0.0	0.0	T OUT 0130 hr
E. Final Flow	39.0	64.0	0.0	0.0	0.0	
F. Fl Shut-in	936.0	954.0	0.0	0.0	0.0	TOOL DATA-----
G. Final Hydro	2188.0	2225.0	0.0	0.0	0.0	Tool Wt. 800.00 lbs
Inside/Outside	I	I	O			Wt Set On Packer 20000.00 lbs

RECOVERY

Tot Fluid 55.00 ft of 30.00 ft in DC and 25.00 ft in DP
 55.00 ft of Mud Cut Oil
 0.00 ft of 40% mud 60% oil
 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

BLOW DESCRIPTION

Initial Flow:
 Weak Blow, building to 1"

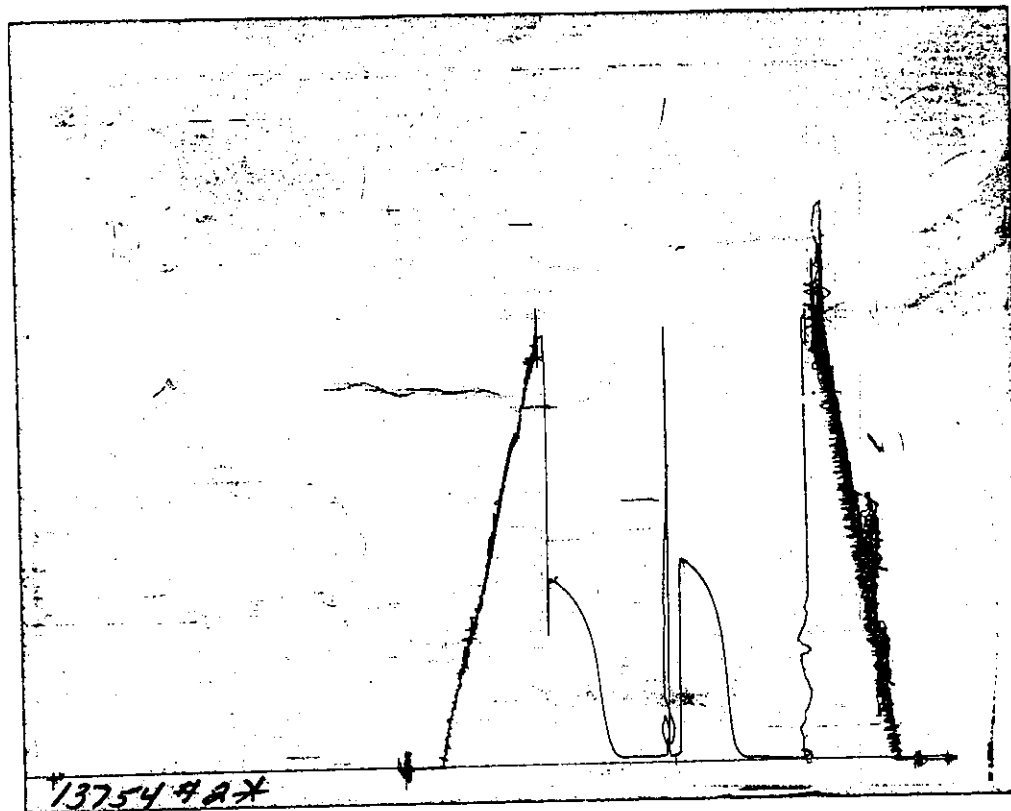
Final Flow:
 No blow, flushed tool, Good Surge,
 weak steady surface blow

SAMPLES:
 SENT TO:

MUD DATA-----
 Mud Type Chemical
 Weight 9.40 lb/c
 Vis. 47.00 S/L
 W.L. 8.00 in3
 F.C. 0.00 in
 Mud Drop
 Amt. of fill 0.00 ft
 Btm. H. Temp. 122.00 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 Dan Bangle
 Co. Rep. Ron Nelson
 Contr. Discovery
 Rig # 1
 Unit #
 Pump T.

Test Successful: Y

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

Test Ticket

No 10401

Well Name & No. Eval "E" #2 Test No. 2 Date 7-11-97
Company Thomas C Lutz Zone Tested Miss
Address _____ Elevation 2575 KB 2567 GL
Co. Rep / Geo. Ron Nelson Cont. Discovery #1 Est. Ft. of Pay _____ Por. _____ %
Location: Sec. 14 Twp. 16 Rge. 26 Co. Ness State Ks
No. of Copies _____ Distribution Sheet (Y, N) _____ Turnkey (Y, N) _____ Evaluation (Y, N) _____

Interval Tested 4502 - 4515 Initial Str Wt./Lbs. 42000 Unseated Str Wt./Lbs. 44000
Anchor Length 13 Wt. Set Lbs. 20000 Wt. Pulled Loose/Lbs. 45000
Top Packer Depth 4497 Tool Weight 800
Bottom Packer Depth 4502 Hole Size — 7 7/8" Rubber Size — 6 3/4"
Total Depth 4515 Wt. Pipe Run _____ Drill Collar Run 30
Mud Wt. 9.4 LCM _____ Vis. 37 WL 8 Drill Pipe Size 4.5XH Ft. Run 4452
Blow Description IF-weak building to 1"

E.F. No blow - flushed tool - Good Surge - Weak steady surface blow

Recovery — Total Feet	GIP	Ft. in DC	Ft. in DP	%gas	%oil	%water	%mud
<u>55</u>		<u>30</u>	<u>25</u>	<u>60</u>		<u>40</u>	
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 122 °F Gravity _____ °API D@ _____ °F Corrected Gravity _____ °API
RW _____ @ _____ °F Chlorides _____ ppm Recovery Chlorides 8,000 ppm System
(A) Initial Hydrostatic Mud 22.38 PSI Recorder No. 13254 T-Started 19:30
(B) First Initial Flow Pressure 19 PSI (depth) 4504 T-Open 20:45
(C) First Final Flow Pressure 29 PSI Recorder No. 13248 T-Pulled 23:45
(D) Initial Shut-in Pressure 10.36 PSI (depth) 4512 T-Out 01:30
(E) Second Initial Flow Pressure 39 PSI Recorder No. _____
(F) Second Final Flow Pressure 39 PSI (depth) _____
(G) Final Shut-in Pressure 9.36 PSI Initial Opening 45 Test _____
(H) Final Hydrostatic Mud 21.88 PSI Initial Shut-in 45 Jars _____
Final Flow 45 Safety Joint _____
Final Shut-in 45 Straddle _____
_____ Circ. Sub _____
_____ Sampler _____
_____ Extra Packer _____
_____ Elect. Rec. _____
_____ Other _____

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Approved By _____

TRILOBITE TESTING L.L.C.

OPERATOR : Thomas C Lutz
 WELL NAME: Evel "E" #2
 LOCATION : 14-16S-26W Ness KS
 INTERVAL : 4502.00 To 4524.00 ft

DATE 7/12/97

KB 2575.00 ft TICKET NO: 10402 DST #3
 GR 2567.00 ft FORMATION: Mississippi
 TD 4524.00 ft TEST TYPE: CONV

RECORDER DATA

Mins		Field	1	2	3	4	TIME DATA-----
PF 30	Rec.	13754	13754	13248			PF Fr. 0930 to 1000 hr
SI 30	Range (Psi)	4000.0	4000.0	4500.0	0.0	0.0	IS Fr. 1000 to 1030 hr
SF 30	Clock(hrs)	12 hr	12 hr	12 hr			SF Fr. 1030 to 1100 hr
FS 30	Depth(ft)	4504.0	4504.0	4521.0	0.0	0.0	FS Fr. 1100 to 1130 hr

	Field	1	2	3	4	
A. Init Hydro	2289.0	2273.0	0.0	0.0	0.0	T STARTED 0800 hr
B. First Flow	29.0	34.0	0.0	0.0	0.0	T ON BOTM 0920 hr
B1. Final Flow	29.0	34.0	0.0	0.0	0.0	T OPEN 0930 hr
C. In Shut-in	936.0	939.0	0.0	0.0	0.0	T PULLED 1130 hr
D. Init Flow	39.0	48.0	0.0	0.0	0.0	T OUT 1315 hr
E. Final Flow	39.0	48.0	0.0	0.0	0.0	
F. Fl Shut-in	818.0	836.0	0.0	0.0	0.0	TOOL DATA-----
G. Final Hydro	2238.0	2263.0	0.0	0.0	0.0	Tool Wt. 800.00 lbs
Inside/Outside	I	I	O			Wt Set On Packer 20000.00 lbs

RECOVERY
 Tot Fluid 55.00 ft of 30.00 ft in DC and 25.00 ft in DP
 30.00 ft of Clean Oil
 0.00 ft of
 25.00 ft of Mud Cut Oil
 0.00 ft of 20% mud 80% oil
 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 38.00

Wt Pulled Loose 45000.00 lbs
 Initial Str Wt 42000.00 lbs
 Unseated Str Wt 42000.00 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 30.00 ft
 D.P. Length 4452.00 ft

BLOW DESCRIPTION
 Initial Flow:
 Weak Blow, Building to 1"

Final Flow:
 Weak steady surface blow

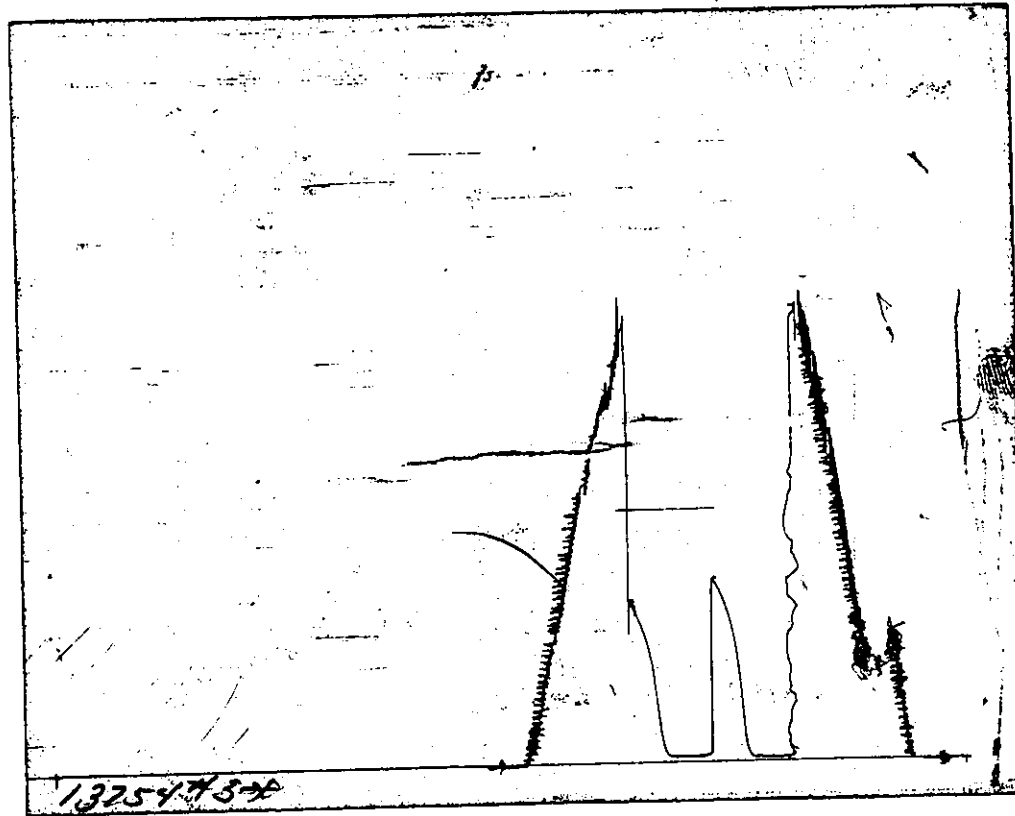
MUD DATA-----
 Mud Type Chemical
 Weight 9.30 lb/
 Vis. 58.00 S/L
 W.L. 8.00 in3
 F.C. 0.00 in
 Mud Drop

Amt. of fill 0.00 ft
 Btm. H. Temp. 118.00 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 Dan Bangle
 Co. Rep. Ron Nelson
 Contr. Discovery
 Rig # 1
 Unit #
 Pump T.

SAMPLES:
 SENT TO:

Test Successful: Y

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

Test Ticket

No 10402

Well Name & No. <u>Evel "E" #2</u>	Test No. <u>3</u>	Date <u>7-12-97</u>
Company <u>Thomas C Lutz</u>	Zone Tested <u>Miss</u>	
Address _____	Elevation <u>2525</u>	KB <u>2567</u> GL
Co. Rep / Geo. <u>Ken Nelson</u>	Cont. <u>Discovery #1</u>	Est. Ft. of Pay _____ Por. _____ %
Location: Sec. <u>14</u>	Twp. <u>16</u>	Rge. <u>26</u> Co. <u>Ness</u> State <u>Ks</u>
No. of Copies _____	Distribution Sheet (Y, N) _____	Turnkey (Y, N) _____ Evaluation (Y, N) _____

Interval Tested 4502 - 4524 Initial Str Wt./Lbs. 42,000 Unseated Str Wt./Lbs. 42,000
Anchor Length 22 Wt. Set Lbs. 20,000 Wt. Pulled Loose/Lbs. 45,000
Top Packer Depth 4497 Tool Weight 800
Bottom Packer Depth 4502 Hole Size — 7 7/8" Rubber Size — 6 3/4"
Total Depth 4524 Wt. Pipe Run _____ Drill Collar Run 30
Mud Wt. 9.3 LCM Y4# Vis. 58 WL 8 Drill Pipe Size 4.5 XH Ft. Run 4452
Blow Description IF - weak - building to 1"
F.F. weak steady surface blow

Recovery — Total Feet 55 GIP 30 Ft. in DC 30 Ft. in DP 25

Rec.	Feet Of	%gas	%oil	%water	%mud
<u>30</u>	<u>CO</u>	<u>100</u>			
<u>25</u>	<u>MCO</u>	<u>80</u>		<u>20</u>	
_____	Feet Of _____	%gas	%oil	%water	%mud
_____	Feet Of _____	%gas	%oil	%water	%mud
_____	Feet Of _____	%gas	%oil	%water	%mud

BHT 118 °F Gravity _____ °API D@ _____ °F Corrected Gravity 38 °API
RW _____ @ _____ °F Chlorides _____ ppm Recovery Chlorides 2,000 ppm System

(A) Initial Hydrostatic Mud 2289 PSI Recorder No. 13754 T-Started 08:00
(B) First Initial Flow Pressure 29 PSI (depth) 4504 T-Open 09:30
(C) First Final Flow Pressure 29 PSI Recorder No. 13248 T-Pulled 11:20
(D) Initial Shut-in Pressure 936 PSI (depth) 4521 T-Out 13:25
(E) Second Initial Flow Pressure 39 PSI Recorder No. _____
(F) Second Final Flow Pressure 39 PSI (depth) _____
(G) Final Shut-in Pressure 818 PSI Initial Opening 30 Test _____
(H) Final Hydrostatic Mud 2238 PSI Initial Shut-in 30 Jars _____

Final Flow 30 Safety Joint _____

Final Shut-in 30 Straddle _____

_____ Circ. Sub _____

_____ Sampler _____

Extra Packer _____

Elect. Rec. _____

Other _____

TOTAL PRICE \$ _____

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Approved By _____

Our Representative Dave Rangle