FORM MUST BE TYPED

ORIGINAL

SIDE ONE

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

API NO. 15- 135-23992 0000

County Ness

83'W.CN/2 NE - SE Sec. 24 Twp. 16s Rge. 26w X

2310 Feet from (S) N (circle one) Line of Section

743 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 Nichepor Well # 11

Field Name Arnold SW

Producing Formation None

Elevation: Ground 2588 KB 2596

Total Depth 4554 PBTD

Amount of Surface Pipe Set and Cemented at 232.02 Fe

Multiple Stage Cementing Collar Used? ____ Yes X

If yes, show depth set ____ Fe

If Alternate II completion, cement circulated from ____

feet depth to ____ w/ ____ sx cm

Drilling Fluid Management Plan P+A 3-16-98 U.C.
(Data must be collected from the Reserve Pit)

Chloride content 19,000 ppm Fluid volume 2500 bb

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 # 7200

Name: Scott T. Lutz

Address P.O. Drawer D

City/State/Zip Shell Knob, MO 65747

Purchaser: ____

Operator Contact Person: Scott T. Lutz

Phone (417) 858-6628

Contractor: Name: Discovery Drilling, Inc.

License: 31548

Wellsite Geologist: Ron Nelson

Designate Type of Completion
X New Well ____ Re-Entry ____ Workover

____ Oil ____ SWD ____ SIOW ____ Temp. Abd.
____ Gas ____ ENHR ____ SIGW
X Dry ____ Other (Core, WSW, 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. ____

4/23/97 Spud Date | 4/29/97 Date Reached TD | 4/30/97 Completion Date

RECEIVED
STATE CORPORATION COMMISSION
JUL 17 1997
CONSERVATION DIVISION
Wichita, Kansas

INSTRUCTIONS: An original and two copies of this form shall be filed with the Kansas Corporation Commission, 200 Colorad 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 o 12 months if requested in writing and submitted with the form (see rule 82-3-107 for confidentiality in excess of 1 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 compli with and the statements herein are complete and correct to the best of my knowledge.

Signature ____

Title Operations Date 7/15/97

Subscribed and sworn to before me this 15th day of July, 1997.

Notary Public ____

Date Commission Expires 05.22.00

NOTARY PUBLIC - State of Kansas
PAIGE E. McCUE
My Appt. Exp. ____

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)

Form ACO-1 (7-91)

SIDE TWO

ORIGINAL

Operator Name Scott T. Lutz Lease Name Nie[illegible]epor Well # 11

Sec. 24 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 givi interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static leve hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface during test. Attach extra sh if more space is needed. Attach copy of log.

Drill Stem Tests Taken (Attach Additional Sheets.)	☐ Yes	☒ No	☐ Log	Formation (Top), Depth and Datums ☐ Sample
Samples Sent to Geological Survey	☐ Yes	☒ No	Name	Top Datum
Cores Taken	☐ Yes	☒ No		
Electric Log Run (Submit Copy.)	☐ Yes	☒ No		
List All E.Logs Run:				

CASING RECORD ☒ New ☐ Used

Report all strings set-conductor, surface, intermediate, production, etc.

Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs./Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives
Surface Pipe	12¼	8 5/8	20	232.02	60/40Poz	160	2%Gel&3%CC

ADDITIONAL CEMENTING/SQUEEZE RECORD

Purpose:	Depth Top	Depth Bottom	Type of Cement	#Sacks Used	Type and Percent Additives
___ Perforate					
___ Protect Casing					
___ Plug Back TD					
___ Plug Off Zone					

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record (Amount and Kind of Material Used)	Depth

TUBING RECORD Size Set At Packer At Liner Run ☐ Yes ☐ No

Date of First, Resumed Production, SWD or Inj. P+A Producing Method ☐ Flowing ☐ Pumping ☐ Gas Lift ☐ Other (Explain)

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity
	N-A				

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

[illegible] RECEIVED [illegible]

ORIGINAL

Discovery Drilling

P.O. Box 763 • Hays, KS 67601 • OFFICE (913) 623-2920 • CELLULAR (913) 635-1511

15-135-23992

DRILLER'S LOG

Operator: **SCOTT T. LUTZ**
P.O. Drawer D
Shell Knob, MO 65747

Contractor: **DISCOVERY DRILLING, INC.**
P.O. Box 763
Hays, KS 67601

Lease: Nichepor #11

Location: 83' Wof CN/2 NE/SE
Sec. 24/16S/26W
Ness Co., KS

Loggers Total Depth: NO LOG
Rotary Total Depth: 4554'
Commenced: 04/23/97
Casing: 8 5/8" @ 232.02' w/160sks

Elevation: 2588 Gr/2596 KB
Completed: 04/30/97
Status: D & A

DEPTHS & FORMATIONS

(All measurements from K.B.)

Surface, Sand & Shale	0'	Shales	2011'
Dakota Sand	551'	Shales & Lime	2231'
Shales	692'	Shales	2368'
Cedar Hill Sand	1464'	Shales & Lime	2826'
Red Bed Shale	1774'	Lime & Shales	3869'
Anhydrite	1976'	RTD	4554'
Base Anhydrite	2011'		

RECEIVED
KANSAS CORP. COM.
1997 DEC 17 A 11:39

STATE OF KANSAS)
) ss
COUNTY OF ELLIS)

Thomas H. Alm of Discovery Drilling, Inc. states that to the best of his knowledge the above and foregoing is a true and correct log of the above captioned well.

Thomas H. Alm

Subscribed and sworn to before me on 5-3-97.

My Commission Expires: 9-20-2000.

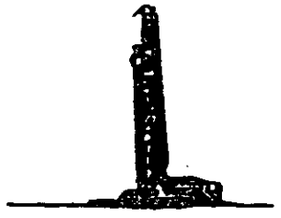
(Place stamp or seal above.) ARDITH R. HURST NOTARY PUBLIC STATE OF KANSAS My Appt. Exp. 9-20-2000

Notary Public

DISCOVERY DRILLING

P. O. Box 763 HAYS, KANSAS 67601

ORIGINAL



(913) 623-2920

Contractor Discovery Drilling, Inc Rig No. 2

Company Scott T. Lutz

API # 135-23992 Elevation 2596 K.B. R.T.D. 4554

Tool Joint Conn. XH Drill Pipe Size 4½ Drill Collars No. 16 O.D. 6⅛" I.D. 2 3/8" Pump No. 1 Emsco D-375

Tool Pusher Alm Driller Carl Goff Driller Andy Dinkel Driller Darby Keever

Lease Nicheper Well No. 11

State Kansas County Ness Field Arnold SW

Spot 83'W C N/2 NE SE Section 24 Township 16S RN 26W

RECEIVED
KANSAS CORP COMM
JUL 17 A 11:39

Run No.	Size	Make	Type	Jet Size	Serial	Depth From	Depth To	Feet	Hours	Feet Per Hour	Weight 1000 Lbs.	RPM	Vert. Dev.	Pump Press.	Formation Tops
1	12¼	HTC	CR1	3/14	A52 HR	0	235	235	2	112.5	Au/20	120	½°	600	Dakota Sand
2	7 7/8	HTC	ATJ11C	3/13	U14XX	235	4554	4319	103½	41.7	20/38	70/90		900	Cedar Hills Sand
								(4554 - 105.5 HRS = 43.16 FPH)							Anhydrite (1976-2011)
															Topeka
															Heebner
															Toronto
															LKC-BKC
															Marmaton
															Arbuckle
															Geo. Name - Ron Nelson
															Phone - (913) 628-3449
															Dst #1 No Tests
															Dst #2
															Dst #3
															Dst #4
															Dst #5
															Dst #6
															Dst #7
															Dst #8
															Dst #9
															Dst #10
															Dst #11
															Dst #12

Cat Bornbeck

Truck Rainbow & Company

Water-Hauling None

Testing None

Cement Surface Allied Cementing

Loggers No Log L.T.D.

Casing Crew None

Fuel Schreiner's, Inc.

Mud Company Andy's Type Drispac

Surface Mud Used 30 Gel - 4 Lime - 4 Hulls

Mud Up @ 3600'

1' Drlg. Time @ 3700' 10' Wet & Dry @ 3800'

Mud Cost - $ 3524.16 + FRT

Surface Pipe - Co. Trucks [Other]

No Service Mud - Yes [No]

Water Well No

Frac Tank Tom's Tank Service

Motel None

Back Hoe None

Welder None

Reserve Pit Chlorides 19,000 PPM

Pit Liner 1

2 ¢ S waterline - Pumped water from Shorty's 1.7 miles

Plugging Report

State Plugger - Steve Middleton

50 sks @ 2011'

80 sks @ 1150'

40 sks @ 650'

40 sks @ 260'

10 sks @ 40'

10 sks @ Mouse Hole

15 sks @ Rat Hole

sks @

sks @

245 sks (Total) 60/40 Poz 6% Gel w/ ¼# FS

Plug Down @ 9:00 A.M. 4/30/97

Rig Release @ A.M. P.M.

Job By - Allied Cementing

Surface Pipe

Ran 5 jts. [new] 20 # 8-5/8" casing

Talley 222.02 set @ 232.02 K.B.

Cemented w/ 160 sks. 60/40 Poz 2% Gel & 3% C.C.

Cement Did Circulate

Plug Down @ 10:45 [P.M.] 4,23,97

Spud @ 5:30 [P.M.] 4,23,97

Drilled Plug @ 6:45 A.M. [ ] 4,24,97

Job By - Allied Cementing

WATER INFORMATION

Name - Charles Walker Jr.

Address - P.O. Box 117

City Utica, Kansas 67584

Phone # - (913) 391-2408

Social Security # 511-34-9982

Amount $ 800.00

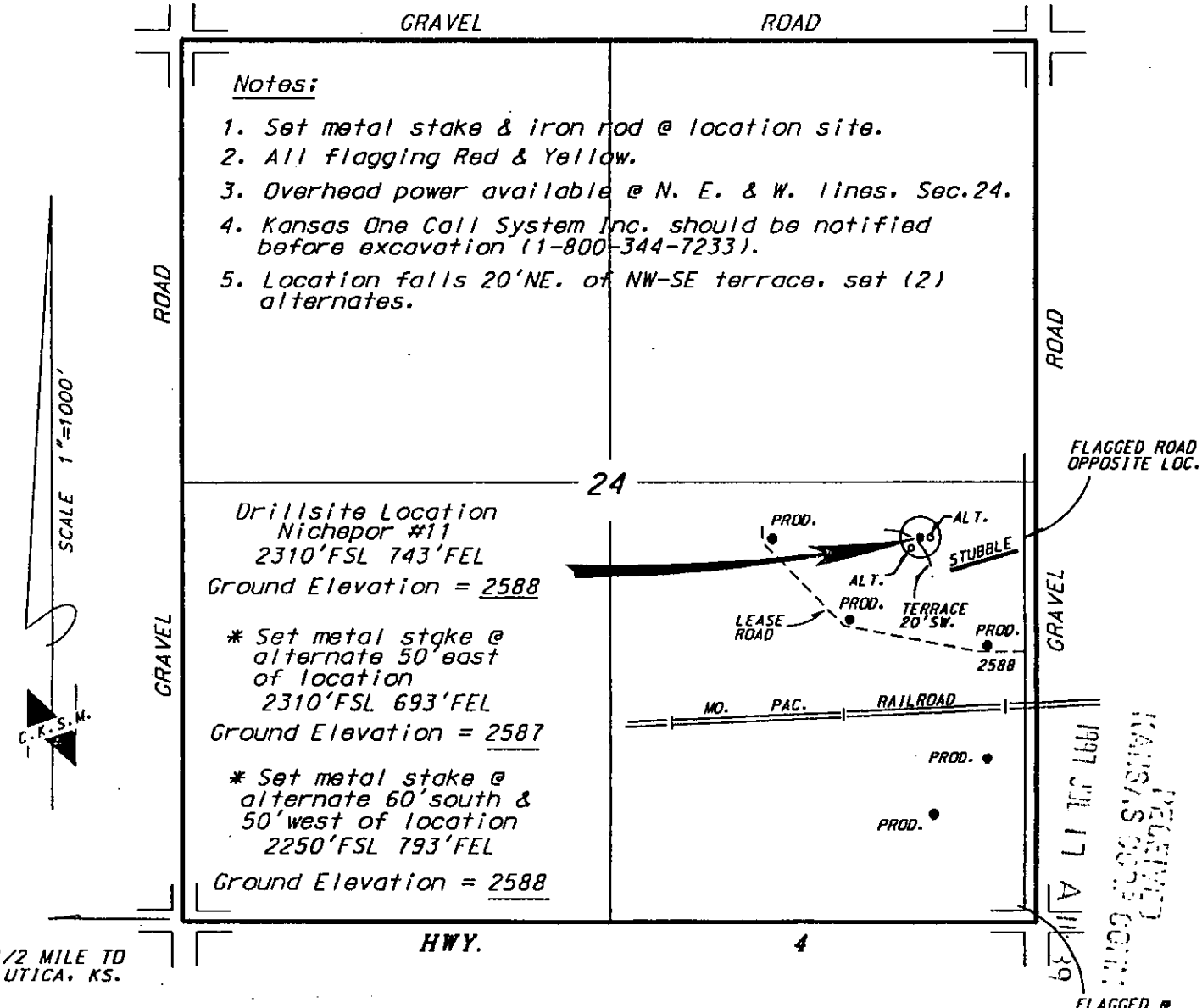
Section 14 Township 16S Range 26W

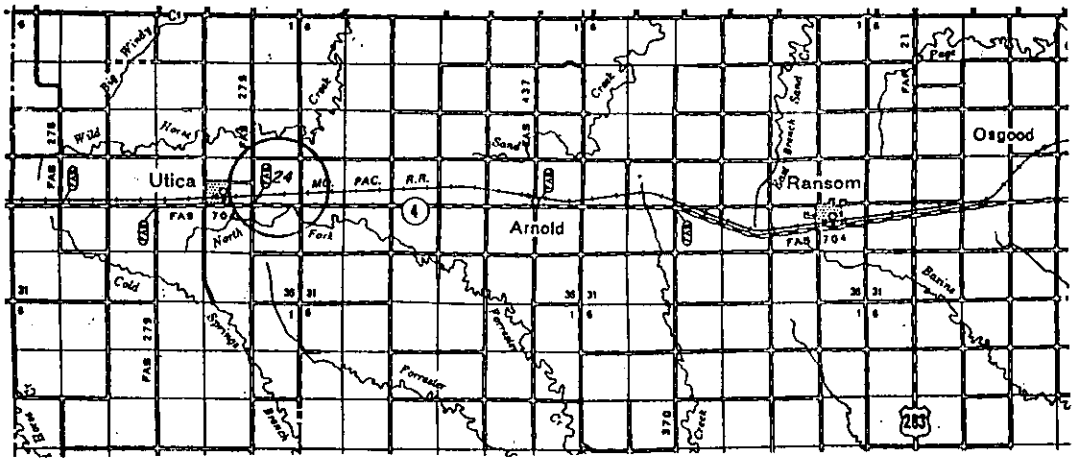
[Pond] Water Well Other

FSL FEL Permit # 859017

SCOTT THOMAS LUTZ
NICHEPOR LEASE
SE.1/4. SECTION 24. T16S. R26W
NESS COUNTY. KANSAS

ORIGINAL





Controlling data is based upon the best maps and photographs available to us and upon a regular section of land containing 640 acres.

Approximate section lines were determined using the normal standard of care of oilfield surveyors practicing in the state of Kansas. The section corners, which establish the precise section lines, were not necessarily located, and the exact location of the drillsite location in the section is not guaranteed.

Elevations derived from National Geodetic Vertical Datum.

Date March 31, 1997

CENTRAL KANSAS SURVEYING & MAPPING, INC. (316) 792-5754

ANDY'S "Mud Doctor"
MUD & CHEMICAL CO.
(913) 625-3531
HAYS, KANSAS 67601

● ORIGINAL
DRILLING MUD REPORT

REPORT NO. 4

DATE 4-28 1997 | DEPTH 4463

APT WELL NO.	STATE	COUNTY	WELL	S/T

OPERATOR: Scott Lutz
CONTRACTOR: Discovery
RIG NO.: 1
ADDRESS: [illegible]
ADDRESS: Big
SPUD DATE: 4-22-97
REPORT FOR MR.: Ron Nelson
REPORT FOR MR.: Leon Alm
SECTION, TOWNSHIP, RANGE: 34-16, 22
WELL NAME AND NO.: Nicherpox #11
FIELD OR BLOCK NO.:
COUNTY AREA: Ness
STATE: KS

Drilling Assembly

Bit Size: 7 7/8	No. Bits: 2	Jet Size: 3/13	
Drill Pipe Size: 4 1/2	Type: XH	Length:	
Drill Collar Size: 6	Length:	No. Pits: 3	
Bit RPM: 60		Weight on Bit: 30,000	
Last Bit No.:		Present Activity: Drlg	

Casing

Surface: 8 5/8 @ Ft.	
Intermediate: @ Ft.	
Production or Liner: @ Ft.	

Mud Volume (BBL)

Hole: 300	Pits: 300
Total Circulating Volume: 600	
Mud Up Depth: 3600	

Circulation Data

Pump Size x in.: 6 x 14		Annular Vel (Ft/Min) DP 197 DC 356
Pump Make, Model	Assumed Eff. 90	Circulation Pressure (PSI): 1000
Bbl/Stroke: .0134	Stroke/Min.: 60	Bottoms Up (Min.): 38+
Bbl/Min.: 6.0	Gal/Min.: 336	Total Circ Time (Min.): 95+
Elevation:		

Mud Type: Chemical / Drispac

Sample from ☑ Flowline ( ) Pit
Flowing Temperature F

MUD PROPERTIES

Time Sample Taken	8:00	AM	
Depth (ft.)	4463		
Weight ☑ (ppg) ☐ (lb./cu. ft.)	9.4		
Mud Gradient (psi/ft.)	.488		
Funnel Viscosity (sec./qt.) API at °F	54		
Plastic Viscosity cp at / °F	11		
Yield Point (lb./100 sq. ft.)	14		
Gel Strength (lb./100 sq. ft.) 10 sec./10 min.	1 8 2		
pH ☑ Strip ☐ Meter	10.5		
Filtrate API (ml./30 min.)	8.0		
API HP-HT Filtrate (ml/30 min.) °F	—		
Cake Thickness 32nd in. API ☑ HP - HT ☐	1/32		
Alkalinity, Mud (Pm)	—		
Alkalinity, Filtrate (Pf / Mf)	.7/2.1		
Salt ☐ppm ☐ppg Chloride ☐ppm ☐ppg	3,000		
Calcium ☑ ppm ☐ Gyp (ppb)	20		
Sand Content (% by Vol.)	Tr		
Solids Content (% by Vol.)	7.7		
Oil Content (% by Vol.)	—		
Water Content (% by Vol.)	92.3		
LCM, #/bbl	Tr		
Methylene Blue Capacity ☐ (ml/ml mud) ☐ (equiv. lb/bbl. bent.)	/		

Mud Used:

30 Gel	205.50
2 Lignite	98.30
1 Hi Yield	12.76
4 Sodaash	56.80

Daily Cost: 358.16
Cumulative Cost: 35,241.16

MUD PROPERTIES SPECIFICATIONS

WEIGHT	VISCOSITY	FILTRATE
9.5-	45 32nd	10cc

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

RECOMMENDED TOUR TREATMENT

- ☐
- ☐ Hourly Vis. 50+ Gel to T.D.
- ☐ Alkalinity
- ☐ Wt. 9.5 or Less
- ☐
- ☐
- ☐

REMARKS:

Try Not To Purge The Drill Str
Short Trip Prior To Dst a Log
Run Hole Clean
Keep Hole Full

ANDY'S "Mud Doctor"
MUD & CHEMICAL CO.
(913) 625-3531
HAYS, KANSAS 67601

ORIGINAL

DRILLING MUD REPORT

REPORT NO. 3

DATE 4-28 1997 DEPTH 4177

APT WELL NO.	STATE	COUNTY	WELL	S/T

OPERATOR	CONTRACTOR	RIG NO.
Scott Sutton Oil Co.	Discovery Drlg	2
ADDRESS	**ADDRESS**	**SPUD DATE**
	Big	4-22-97
REPORT FOR MR.	**REPORT FOR MR.**	**SECTION, TOWNSHIP, RANGE**
Bon Nelson	Tom Alm	24-16-26

WELL NAME AND NO.	FIELD OR BLOCK NO.	COUNTY AREA	STATE
Micherper #11		Ness	KS

Drilling Assembly			Casing	Mud Volume (BBL)		Circulation Data		
Bit Size 7 7/8	No. Bits 2	Jet Size 3/13	Surface 8 5/8 @ 232 Ft.	Hole 275	Pits 375	Pump Size x in. 6 x 14		Annular Vel (Ft/Min) DP 198 DC 356
Drill Pipe Size 4 1/2	Type X H	Length	Intermediate @ Ft.	Total Circulating Volume 550		Pump Make, Model	Assumed Eff. 70	Circulation Pressure (PSI) 1000+
Drill Collar Size 6	Length	No. Pits 3	Production or Liner @ Ft.	Mud Up Depth 3600		Bbl/Stroke 0.137	Stroke/Min. 60	Bottoms Up (Min.) 35+
Bit RPM 60		Weight on Bit 30,000		Mud Type Chemical / Dispac		Bbl/Min. 8.0	Gal/Min. 336	Total Circ Time (Min.) 69+
Last Bit No.		Present Activity Drlg				Elevation		

Sample from ☑ Flowline ( ) Pit
Flowing Temperature F

MUD PROPERTIES			
Time Sample Taken	8:00	AM	PM
Depth (ft.)	4177		
Weight ☑ (ppg) ☐ (lb./cu. ft.)	9.3		
Mud Gradient (psi/ft.)	.484		
Funnel Viscosity (sec./qt.) API at °F	47		
Plastic Viscosity cp at / °F	9		
Yield Point (lb./100 sq. ft.)	12		
Gel Strength (lb./100 sq. ft.) 10 sec./10 min.	7/21		
pH ☑ Strip ☐ Meter	10.0		
Filtrate API (ml./30 min.)	8.8		
API HP-HT Filtrate (ml/30 min.) °F	—		
Cake Thickness 32nd in. API ☑ HP - HT ☐	1/32		
Alkalinity, Mud (Pm)			
Alkalinity, Filtrate (Pf / Mf)	.5/4.0		
Salt ☐ ppm ☐ ppt Chloride ☐ ppm ☐ ppt	3500		
Calcium ☑ ppm ☐ Gyp (ppb)	40		
Sand Content (% by Vol.)	Tr.		
Solids Content (% by Vol.)	6.8		
Oil Content (% by Vol.)	—		
Water Content (% by Vol.)	93.2		
LCM, #/bbl	Tr		
Methylene Blue Capacity ☐ (mil/ml mud) ☐ (equiv. lb/bbl bent.)	—		

Mud Used:	
30-Gel	20 Sacks
5-Sodium Bicarb	70.00
2-Biozan	3 Gals
1-Caustic	39.45
Daily Cost 350.47	Cumulative Cost 31486.00

MUD PROPERTIES SPECIFICATIONS

WEIGHT	VISCOSITY	FILTRATE
9.5 -	45 + 15	12cc -

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

RECOMMENDED TOUR TREATMENT

- ☐
- ☐ Tourly-Vis. 45+ Gel & Pit Mud
- ☐ Lt. Mainly If Needed
- ☐ Wt. & Fl. Loss
- ☐
- ☐ 24-Hr. Chemical Treatment Premix - 30 bbls. Pit Mud, 50 lbs. Water Mix - Caustic
- ☐ 4-Sodium Bicarb
- ☐ 1-Biozan
- ☐ Vis. 45+ Gel
- ☐ Add Lime to System
- ☐ Short Trip Prior to DST & Log
- ☐ Circ. Hole Clean
- ☐ Always Keep Hole Full
- ☐ Pump All DST Water Off of Pits

REMARKS:

Suggest To Get Some Mud Hole Before Adding

ANDY'S "Mud Doctor"
MUD & CHEMICAL CO.
(913) 625-3531
HAYS, KANSAS 67601

ORIGINAL

DRILLING MUD REPORT

REPORT NO. 2

DATE 4/27 1997 DEPTH 3624

APT WELL NO.	STATE	COUNTY	WELL	S/T

OPERATOR: Scott Lutz	CONTRACTOR: Discovery	RIG NO.: 2
ADDRESS: Co.	ADDRESS: Rig	SPUD DATE: 4/22/97
REPORT FOR MR.: Dan Nelson	REPORT FOR MR.: Tom Mm	SECTION, TOWNSHIP, RANGE: 24-16-26

WELL NAME AND NO.	FIELD OR BLOCK NO.	COUNTY AREA	STATE
Nickerson #11		Ness	Ks

Drilling Assembly

Bit Size: 7 7/8	No. Bits: 2	Jet Size: 7/13
Drill Pipe Size: 4 1/2	Type: XH	Length:
Drill Collar Size: 6	Length:	No. Pits: 3
Bit RPM: 60	Weight on Bit: 30,000	
Last Bit No.: 235	Present Activity: Drlg	

Casing

Surface: 8 5/8" 232 Ft.
Intermediate: Ft.
Production or Liner: Ft.
Mud Type: Chemical Drispac

Mud Volume (BBL)

Hole: 238 Pits: 200
Total Circulating Volume: 438
Mud Up Depth: 3600'

Circulation Data

Pump Size: 6 x 14 in.	Annular Vel (Ft/Min): DP 198 DC 356
Pump Make, Model: Assumed Eff. 90	Circulation Pressure (PSI): 1000+
Bbl/Stroke: .134 Stroke/Min.: 60	Bottoms Up (Min.): 30+
Bbl/Min.: 8.0 Gal/Min.: 336	Total Circ Time (Min.):
Elevation:	59+

Sample from [x] Flowline ( ) Pit
Flowing Temperature °F

MUD PROPERTIES

Time Sample Taken		9 AM	
Depth (ft.)	3624		
Weight [x] (ppg) [ ] (lb./cu. ft.)	8.8		
Mud Gradient (psi/ft.)	.458		
Funnel Viscosity (sec./qt.) API at °F	47		
Plastic Viscosity cp at / °F	6		
Yield Point (lb./100 sq. ft.)	10		
Gel Strength (lb./100 sq. ft.) 10 sec./10 min.	7/12	/	/
pH [x] Strip [ ] Meter	12.0		
Filtrate API (ml./30 min.)	12.0		
API HP-HT Filtrate (ml/30 min.) °F	—		
Cake Thickness 32nd in. API [x] HP-HT [ ]	1/32		
Alkalinity, Mud (Pm)	—		
Alkalinity, Filtrate (Pf / Mf)	1.5/35	/	/
Salt ppm/ppg — Chloride ppm/ppg	5000		
Calcium [x] ppm [ ] Gyp (ppb)	40		
Sand Content (% by Vol.)	Tr.		
Solids Content (% by Vol.)	3.4		
Oil Content (% by Vol.)	—		
Water Content (% by Vol.)	96.6		
LCM, #/bbl	1/2		
Methylene Blue Capacity (mlbl mud) (equiv. #/bbl. bent.)	—		

Mud Used:

6-Lime	44.34
1-Drispac	292.80
8-caustic	315.16
8-Lignite	142.08
17-Soda Ash	238.00
22-Hulls	242.00
225-Gel	1541.25
Daily Cost	Cumulative Cost 2815.53

MUD PROPERTIES SPECIFICATIONS

WEIGHT	VISCOSITY	FILTRATE
9.5 -	45 Bot / Est Dstg	12cc -

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

RECOMMENDED TOUR TREATMENT

[ ]
[ ] Tourly = Vis. 38+ Gel & Pit 14.
[ ] L.C.M. As Needed
[ ] Wt. 9.5 or Less
[ ]
[ ]
[ ] At Approx. 4200' Lower

REMARKS:

Reserve Pit
Chlorides 24,000
Calcium 1800

Volume If Needed Add
Premix Tank 80+ bbls. Water
Mix = 30+ Gel Vis. 45+ Bot.
1/3 sx. Drispac
5 Soda Ash
2 Lignite
1 caustic
Add 1 1/2 Hr. to Systems
Short Trip Prior to DST Dstg
Circ. Hole Clean For
Always Keep Hole "Full"

ANDY'S "Mud Doctor"
MUD & CHEMICAL CO.
(913) 625-3531
HAYS, KANSAS 67601

ORIGINAL

DRILLING MUD REPORT

REPORT NO. 1

DATE 4-22 19 97 | DEPTH

APT WELL NO.	STATE	COUNTY	WELL	S/T

OPERATOR: Scott Lutz	CONTRACTOR: Discovery
RIG NO.: 2	
ADDRESS: City	ADDRESS: Rig
SPUD DATE: 4-20-97	
REPORT FOR MR.: Ben Nelson	REPORT FOR MR.: Tom Alan
SECTION, TOWNSHIP, RANGE:	
WELL NAME AND NO.:	FIELD OR BLOCK NO.:
COUNTY AREA: Ness	STATE: KS

Drilling Assembly

Bit Size: 7 7/8	No. Bits:	Jet Size: 3/13
Drill Pipe Size: 4 1/2	Type: XH	Length:
Drill Collar Size: 6	Length:	No. Pits: 3
Bit RPM: 60		Weight on Bit: 30,000
Last Bit No.:		Present Activity:

Casing

Surface: 8 5/8 @ Ft.
Intermediate @ Ft.
Production or Liner @ Ft.

Mud Volume (BBL)

Hole | Pits
Total Circulating Volume
Mud Up Depth
Mud Type: Chemical Drispac

Circulation Data

Pump Size: 6 x 14 in.	Annular Vel (Ft/Min): DP 195 DC 356
Pump Make, Model:	Assumed Eff: 90
Circulation Pressure (PSI): 900	
Bbl/Stroke: .137	Stroke/Min.: 60
Bottoms Up (Min.):	
Bbl/Min.: 8.0	Gal/Min.: 336
Total Circ Time (Min.):	
Elevation:	

Sample from ☐ Flowline ( ) Pit
Flowing Temperature F

MUD PROPERTIES

Time Sample Taken			
Depth (ft.)			
Weight ☐ (ppg) ☐ (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 ☐ Strip ☐ Meter			
Filtrate API (ml./30 min.)			
API HP-HT Filtrate (ml/30 min.) °F			
Cake Thickness 32nd in. API ☐ HP-HT ☐			
Alkalinity, Mud (Pm)			
Alkalinity, Filtrate (Pf / Mf)	/	/	/
Salt ☐ ppm ☐ gpg Chloride ☐ ppm ☐ gpg			
Calcium ☐ ppm ☐ Gyp (ppb)			
Sand Content (% by Vol.)			
Solids Content (% by Vol.)			
Oil Content (% by Vol.)			
Water Content (% by Vol.)			
LCM, #/bbl			
Methylene Blue Capacity ☐ (ml/ml mud) ☐ (equiv. #/Bbl. bent.)			

Mud Used:

Daily Cost | Cumulative Cost

MUD PROPERTIES SPECIFICATIONS

WEIGHT	VISCOSITY	FILTRATE
9.5	45	12cc

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

RECOMMENDED TOUR TREATMENT

☐ Under Surface Con-
☐ trol Wt. 9.5 or Less
☐ At Approx. 3500'
☐ Flush Hole = With
☐ Premix = 80 bbls. Water
☐ 10-Gel, 1-Lime, 1/2-Hulls
☐ Flush Hole As Needed
For Tight Connections.
Fill Frac Tanks = Full of The Following
Premix-Tank = 80+ bbls. Water
Mix = 18-Gel
3-Soda Ash
(No Hulls) 1-Lignite
1-Caustic
1-Dis. Cupac, Drispac

REMARKS:

Andy [signature]

Please Call
If Any Hole
Troubles Off Bottom
When Ready
To Displace

Each Tank 45 Min. Before
Adding To Frac Tanks.
Make Same Mixture In Pre-
Mix For A Stand By.
Always Keep Hole Full

P. O. Box 763
Hays, Kansas 67601

Discovery Drilling

Pipe and Tubing Tally Book

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

ORIGINAL

DATE 4/23/97 COMPANY Scott T. Lutz LEASE Nicheper Well No. 11

SIZE	WEIGHT	MAKE	GRADE	RANGE
8 5/8	20#			

THREAD	COLLAR LENGTH	CONDITION	TRANSFER NOS.	OVERALL TALLY / THREADS OFF TALLY
8 RD		New		

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	43	93	21			41			61			81			101			121			141		
2	44	03	22			42			62			82			102			122			142		
3	46	26	23			43			63			83			103			123			143		
4	43	08	24			44			64			84			104			124			144		
5	44	72	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		
	222	02																					

Totals

+LJ 10 00

232.02

Drillers TD 235 Loggers TD /

No. Jts. Run 5 Size 8 5/8 Wt. 20# Tested 1800#

Cent@ / / / / / / / / / /

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

Cemented By Allied Cementing SKs. Type Cement 160sks 60/40 Poz 2% Gel & 3% C.C.

Flush

Jts. To Be Left Out None

Shoe Jt. 43.93 Pipe Set@ 232.02 Off Bottom 3'

Plug Down 1045 P.M. 4/23/97 Rig Release@ A.M. P.M. / /

Job By Allm

Pipe Left On Location None Jts. Talley Threads On

RECEIVED
APR 24 1997
KCC WICHITA

ALLIED CEMENTING CO., INC. 3619

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

ORIGINAL

SERVICE POINT: Mound City

DATE 4-23-97	SEC. 24	TWP. 16	RANGE 26	CALLED OUT 4:30pm	ON LOCATION 7:00pm	JOB START 10:15pm	JOB FINISH 10:45
LEASE Nichols	WELL # 11		LOCATION Utica 1½E ½N W.S			COUNTY Linn	STATE KS

OLD OR NEW (Circle one)

CONTRACTOR Discovery Drlg
TYPE OF JOB Surface
HOLE SIZE 12¼ T.D. 235
CASING SIZE 8⅝ DEPTH 232
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 160 60/40 3%cc 2%gel

COMMON @
POZMIX @
GEL @
CHLORIDE @
@
@
@
@
@
@
HANDLING @
MILEAGE 25.

TOTAL

EQUIPMENT

PUMP TRUCK CEMENTER J. Wiskamp
224 HELPER B. Norton
BULK TRUCK
260 DRIVER B. White
BULK TRUCK
DRIVER

REMARKS:

Mixed 160 sx 60/40 3%cc 2%gel
Displaced 13¼ BBl. Cement
Shut Csg

Thanks

SERVICE

DEPTH OF JOB
PUMP TRUCK CHARGE
EXTRA FOOTAGE @
MILEAGE 25. @
PLUG Top Wood @
@
@

TOTAL

CHARGE TO: Scott T Luty
STREET P.O. Drawer D
CITY Shell Knob STATE MO. ZIP 65747

FLOAT EQUIPMENT

@
@
@
@
@

TOTAL

ALLIED CEMENTING CO., INC. 5359

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

ORIGINAL

SERVICE POINT: Oakley

DATE	SEC.	TWP.	RANGE	CALLED OUT	ON LOCATION	JOB START	JOB FINISH
4-30-97	24	16	26		2:00 AM	5:45 AM	9:00 AM

LEASE	WELL #	LOCATION	COUNTY	STATE
Nichepor	11	Utica 1½E-½N-¼W	Ness	Kan

OLD OR (NEW) (Circle one)

CONTRACTOR Discovery Drlg #2
TYPE OF JOB PTA
HOLE SIZE 7⅞ T.D. 4554'
CASING SIZE DEPTH
TUBING SIZE DEPTH
DRILL PIPE 4½ XH DEPTH 2011'
TOOL DEPTH
PRES. MAX MINIMUM
MEAS. LINE SHOE JOINT
CEMENT LEFT IN CSG.
PERFS.

OWNER Same

CEMENT

AMOUNT ORDERED 245 sks 60/40 poz 6% Gel, ¼# Flo-Seal

EQUIPMENT

PUMP TRUCK CEMENTER Walt
102 HELPER Walt
BULK TRUCK
212 DRIVER Jeff
BULK TRUCK
DRIVER

COMMON @
POZMIX @
GEL @
CHLORIDE @
@
@
@
@
@
HANDLING 245 sks @ 1.05
MILEAGE 4¢ per sk/mile =
TOTAL

REMARKS:

50 sks @ 2011'
80 sks @ 1150'
40 sks @ 650'
40 sks @ 260'
10 sks @ 40'
10 sks in M.H.
15 sks in R.H.

SERVICE

DEPTH OF JOB 2011'
PUMP TRUCK CHARGE
EXTRA FOOTAGE @
MILEAGE miles @ 2.85
PLUG 8 5/8 D.H. @
@
@
TOTAL

CHARGE TO: Scott T. Lutz
STREET
CITY STATE ZIP

FLOAT EQUIPMENT

@
@
@
@
@
TOTAL