

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

Operator: License # 4549

Name: ANADARKO PETROLEUM CORPORATION

Address P. O. BOX 351

City/State/Zip LIBERAL, KANSAS 67905-0351

Purchaser: ANADARKO ENERGY SERVICES

Operator Contact Person: DAVID W. KAPPLF

Phone (316) 624-6253

Contractor: Name: CHEYENNE DRILLING

License: 5382

Wellsite Geologist: _____

Designate Type of Completion
 New Well Re-Entry Workover

Oil SWD SLOW Temp. Abd.
 Gas ENHR SIGW
 Dry Other (Core, WSW, Expl., Cathodic, etc)

If Workover:

Operator: _____

Well Name: _____

Comp. Date _____ Old Total Depth _____

Deepening Re-perf. Conv. to Inj/SWD
 Plug Back _____ PBDT
 Commingled Docket No. PENDING
 Dual Completion Docket No. _____
 Other (SWD or Inj?) Docket No. _____

8-26-97 9-7-97 10-24-97
Spud Date Date Reached TD Completion Date

API NO. 15- 129-21526 100-00

County MORTON

SE - NE - SE Sec. 2 Twp. 33 Rge. 41 E W

1650 Feet from X(S) (circle one) Line of Section

330 Feet from (S)X (circle one) Line of Section

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

Lease Name THUROW "A" Well # 2

Field Name DUNKLE

Producing Formation L. MORROW/CHEROKEE/ALTAMONT

Elevation: Ground 3420.6 KB _____

Total Depth 5965 PBDT 5172

Amount of Surface Pipe Set and Cemented at 1506 Feet

Multiple Stage Cementing Collar Used? Yes No

If yes, show depth set _____ Feet

If Alternate II completion, cement circulated from _____

feet depth to _____ w/ _____ sx cmt.

Drilling Fluid Management Plan AH-1-7-20-98 U.C.
(Data must be collected from the Reserve Pit)

Chloride content 1650 ppm Fluid volume 700 bbls

Dewatering method used DRY, BACKFILL & RESTORE LOCATION.

Location of fluid disposal if hauled offsite: _____

Operator Name _____

Lease Name _____ License No. _____

_____ Quarter Sec. _____ Twp. _____ S Rng. _____ E/W

County _____ Docket No. _____

11-18-97
1997

INSTRUCTIONS: An original and two copies of this form shall be filed with the Kansas Corporation Commission, 130 S. Market - Room 2078, 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 L. Marc Harvey
L. MARC HARVEY

Title DRILLING TECHNICAL ASSISTANT Date 11-17-97

Subscribed and sworn to before me this 17th day of November 1997.

Notary Public Freda L. King

Date Commission Expires _____

Notary Public - State of Kansas
My Appt. Expires 5-15-99

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

SIDE TWO

Operator Name ANADARKO PETROLEUM CORPORATION Lease Name THURLOW "A" Well # 2

Sec. 2 Twp. 33 Rge. 41 East County MORTON
 West

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.)

List All E.Logs Run: CBL-CCL-GR, DIL, ML, LS SONIC.

2 DST REPORTS ATTACHED.

Log Formation (Top), Depth and Datums Sample

Name	Top	Datum
WELLINGTON	1955	
CHASE	2163	
COUNCIL GROVE	2456	
WABAUNSEE	2879	
TOPEKA	3114	
B/HEEBNER	3543	
LANSING	3638	
KANSAS CITY	3726	
MARMATON	4232	
CHEROKEE	4446	
MORROW	4768	
MISSISSIPPIAN	5204	
ST. LOUIS	5322	
SPERGEN	5500	

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	12-1/4"	8-5/8"	23.0	1506	CLASS C/ CLASS C.	270/100	16% GEL, 3% SALT, 1/4#SK FLC/2%CC, 1/4#SK FLC.
PRODUCTION	7-7/8"	5-1/2"	15.5	5274	65/35 POZMIX/ CLASS H.	100/90	6% GEL, 2%CC/ 10%GYP, 10% SALT, 5% FL-52.

ADDITIONAL CEMENTING/SQUEEZE RECORD

Purpose:	Depth Top Bottom	Type of Cement	#Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate				
<input type="checkbox"/> Protect Casing	5180-5206	CLASS H	100	10% GYP, 10% SALT, .5% FL-52, 1/4#SK CELLOFLAKE.
<input type="checkbox"/> Plug Back TD				
<input checked="" type="checkbox"/> Plug Off Zone	4675	50/50 POZ	155	.75% HALAD 322, 10% SALT, 1/4#SK FLOCELE.

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
4	5200-5206, 5180-5184. SQZD.	NONE.	
2	5140-5146.	ACID: 300 GAL 7 1/2% FeHCL. FRAC: 15360 GAL GEL & 23700# 16/30 SD.	5140-5146 5140-5146
4	4562-4566, 4305-4310.	ACID: 1200 GAL 7 1/2% FeHCL.	4305-4566 (OA)

TUBING RECORD	Size 2 3/8"	Set At 5020	Packer At	Liner Run <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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Date of First, Resumed Production, SWD or Inj. 11-12-97 Producing Method Flowing Pumping Gas Lift Other (Explain)

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity
		2100	17		

Disposition of Gas: Vented Sold Used on Lease (If vented, submit ACO-18.) METHOD OF COMPLETION Open Hole Perf. Dually Comp. Commingled Production Interval 4305-5146 (OA)
 Other (Specify) _____

ORIGINAL

DRILLERS LOG

ANADARKO PETROLEUM CORPORATION
THUROW A-2
SECTION 4-T33S-R41W
MORTON COUNTY, KANSAS

15-129-21526

RECORDED
INDEXED
SEP 13 1997

COMMENCED: 08-26-97
COMPLETED: 09-09-97

SURFACE CASING: 1506' OF 8 5/8" CMTD.
W/320 SKS PREMIUM PLUS + 3% CC + 1/4#/SK
FLOCELE. TAILED IN W/100 SKS PREMIU, PLUS
+ 2% CC + 1/4 #/SK FLOCELE.

FORMATION

DEPTH

SURFACE HOLE
RED BED
LIMESTONE & SHALE

0 - 1506
1506 - 2480
2480 - 5965 RTD

I DO HEREBY CERTIFY THAT THE FOREGOING STATEMENTS ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

CHEYENNE DRILLING, INC.



WRAY VALENTINE

STATE OF KANSAS : ss:

SUBSCRIBED AND SWORN TO BEFORE ME THIS 11TH DAY OF SEPTEMBER, 1997.

JOENE K. RUSSELL



NOTARY PUBLIC

NOTARY PUBLIC
9-13-97

TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

15-129-21526

Test Ticket

ORIGINAL

No. 10264

Well Name & No. <u>Thuraw A #2</u>		Test No. <u>1</u>	Date <u>9-2-99</u>
Company <u>Anadarko Pet. Corp.</u>		Zone Tested <u>Altamont & Pawnee Ft. Scott</u>	
Address <u>Liberty, Kas.</u>		Elevation <u>3434</u> KB <u>3421</u> GL	
Co. Rep / Geo. <u>Ed. Crites</u>	Cont. <u>Cherokee Riv #7</u>	Est. Ft. of Pay <u>21</u>	Por. <u> </u> %
Location: Sec. <u>2</u>	Twp. <u>33</u>	Rge. <u>41</u>	Co. <u>Monroe</u> State <u>KS</u>
No. of Copies <u> </u>	Distribution Sheet (Y, N) <u> </u>	Turnkey (Y, N) <u> </u>	Evaluation (Y, N) <u> </u>

Interval Tested <u>4313 - 4450</u>	Initial Str Wt./Lbs. <u>119,000</u>	Unseated Str Wt./Lbs. <u>116,000</u>
Anchor Length <u>137</u>	Wt. Set Lbs. <u>2,500</u>	Wt. Pulled Loose/Lbs. <u>159,000</u>
Top Packer Depth <u>4308</u>	Tool Weight <u>1,800</u>	
Bottom Packer Depth <u>4313</u>	Hole Size — 7 7/8" <u>X</u>	Rubber Size — 6 3/4" <u>A</u>
Total Depth <u>4450</u>	Wt. Pipe Run <u> </u>	Drill Collar Run <u>658'</u>
Mud Wt. <u>9.0</u> LCM <u>5</u> Vis. <u>44</u> WL <u>7.2</u>	Drill Pipe Size <u>4 1/2 X -0</u>	Ft. Run <u>3753'</u>
Blow Description <u>Strong Blow B.O.B. in 30 sec @ 75 in 5 min MCA @ 370,000</u>		

2nd opening Strong Blow B.O.B. soon as open tool. MCF @ 510,000

Recovery — Total Feet	GIP	Ft. in DC	Ft. in DP	%gas	%oil	%water	%mud
<u>60</u>		<u>60</u>				<u>100</u>	
Feet Of <u>60</u>	<u>Only Mud</u>						
Feet Of							
Feet Of							
Feet Of							
Feet Of							

BHT 115 °F Gravity _____ °API D@ _____ °F Corrected Gravity _____ °API

RW _____ °F Chlorides _____ ppm Recovery Chlorides 4600 ppm System

(A) Initial Hydrostatic Mud <u>2262</u> <u>2031</u> PSI	Recorder No. <u>2359</u>	T-Started <u>2:00pm</u>
(B) First Initial Flow Pressure <u>275</u> <u>84</u> PSI	(depth) <u>4516</u>	T-Open <u>4:17pm</u>
(C) First Final Flow Pressure <u>286</u> <u>132</u> PSI	Recorder No. <u>13278</u>	T-Pulled <u>8:47pm</u>
(D) Initial Shut-In Pressure <u>1026</u> <u>972</u> PSI	(depth) <u>4846</u>	T-Out <u>12:30am</u>
(E) Second Initial Flow Pressure <u>275</u> <u>98</u> PSI	Recorder No. _____	
(F) Second Final Flow Pressure <u>286</u> <u>125</u> PSI	(depth) _____	
(G) Final Shut-In Pressure <u>1015</u> <u>969</u> PSI	Initial Opening <u>30min</u>	Test <input checked="" type="checkbox"/>
(H) Final Hydrostatic Mud <u>2118</u> <u>2005</u> PSI	Initial Shut-in <u>60min</u>	Jars <input checked="" type="checkbox"/>
<u>Alt-1</u>	Final Flow <u>60min</u>	Safety Joint <input checked="" type="checkbox"/>
<u>Alpine</u>	Final Shut-in <u>120min</u>	Straddle <input checked="" type="checkbox"/>
		Circ. Sub <input checked="" type="checkbox"/> <u>W/C</u>
		Sampler <input checked="" type="checkbox"/>
		Extra Packer _____
		Elect. Rec. <input checked="" type="checkbox"/>
		Other _____
		TOTAL PRICE \$ _____

TRILOBITE TESTING L.L.C. SHALL NOT BE LIABLE FOR DAMAGE OF ANY KIND OF THE PROPERTY OR PERSONNEL OF THE ONE FOR WHOM A TEST IS MADE, OR FOR ANY LOSS, BUFFERED OR SUSTAINED, DIRECTLY OR INDIRECTLY, THROUGH THE USE OF ITS EQUIPMENT, OR ITS STATEMENTS OR OPINION CONCERNING THE RESULTS OF ANY TEST, TOOLS LOST OR DAMAGED IN THE HOLE SHALL BE PAID FOR AT COST BY THE PARTY FOR WHOM THE TEST IS MADE.

Approved By [Signature]
 Our Representative [Signature]

TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Test Ticket

ORIGINAL

No. 10265

Well Name & No. <u>Thurou AF#2</u>	Test No. <u>#2</u>	Date <u>9-5-97</u>
Company <u>Andaco A.F. Corp.</u>	Zone Tested <u>St. Louis</u>	
Address <u>Subsidiary</u>	Elevation <u>3431</u> KB <u>3401</u> GL	
Co. Rep / Geo. <u>ED Groves</u>	Cont. <u>Cherokee</u>	Est. Ft. of Pay <u>87</u> Por. <u>9</u> %
Location: Sec. <u>2</u> Twp. <u>33</u> Rge. <u>41</u>	Co. <u>Mocton</u> State <u>KS</u>	
No. of Copies _____	Distribution Sheet (Y, N) _____	Turnkey (Y, N) _____
Evaluation (Y, N) <u>5</u>		

Interval Tested <u>5350 - 5402</u>	Initial Str Wt./Lbs. <u>118,000</u> Unseated Str Wt./Lbs. <u>118,000</u>
Anchor Length <u>.50'</u>	Wt. Set Lbs. <u>25000</u> Wt. Pulled Loose/Lbs. <u>160,000</u>
Top Packer Depth <u>5345'</u>	Tool Weight <u>1800</u>
Bottom Packer Depth <u>5350'</u>	Hole Size — 7 7/8" <u>X</u> Rubber Size — 6 3/4" <u>A</u>
Total Depth <u>5402</u>	Wt. Pipe Run _____ Drill Collar Run <u>658'</u>
Mud Wt. <u>9.1</u> LCM <u>3</u> Vis. <u>47</u> WL <u>9.6</u>	Drill Pipe Size <u>4 1/2" x 0</u> Ft. Run <u>4700'</u>
Blow Description <u>Weak Surface Blow Built to 1 1/2 in. (Slid through 15' Fill after open tool)</u>	
<u>2nd. opening NO Blow</u>	

Recovery — Total Feet <u>180</u>	GIP _____	Ft. in DC <u>180</u>	Ft. in DP _____
Rec. <u>180</u> Feet Of <u>Dry Mud</u>	%gas _____	%oil _____	%water <u>100</u> %mud _____
Rec. _____ Feet Of _____	%gas _____	%oil _____	%water _____ %mud _____
Rec. _____ Feet Of _____	%gas _____	%oil _____	%water _____ %mud _____
Rec. _____ Feet Of _____	%gas _____	%oil _____	%water _____ %mud _____

BHT _____ °F Gravity _____ °API D@ _____ °F Corrected Gravity _____ °API
 RW _____ @ _____ °F Chlorides _____ ppm Recovery Chlorides 1200 ppm System

(A) Initial Hydrostatic Mud <u>2812</u> <u>2617</u> PSI	Recorder No. <u>2359</u>	T-Started <u>3:15pm</u>
(B) First Initial Flow Pressure <u>242</u> <u>79</u> PSI	(depth) <u>5353</u>	T-Open <u>6:00pm</u>
(C) First Final Flow Pressure <u>242</u> <u>90</u> PSI	Recorder No. <u>13278</u>	T-Pulled <u>10:30pm</u>
(D) Initial Shut-in Pressure <u>1368</u> <u>1319</u> PSI	(depth) <u>5378</u>	T-Out <u>2:00am</u>
(E) Second Initial Flow Pressure <u>264</u> <u>90</u> PSI	Recorder No. _____	
(F) Second Final Flow Pressure <u>264</u> <u>110</u> PSI	(depth) _____	
(G) Final Shut-in Pressure <u>1355</u> <u>1316</u> PSI	Initial Opening <u>30min</u>	Test <input checked="" type="checkbox"/> <u>Conventional</u>
(H) Final Hydrostatic Mud <u>2669</u> <u>2541</u> PSI	Initial Shut-in <u>60min</u>	Jars <input checked="" type="checkbox"/>
	Final Flow <u>60min</u>	Safety Joint <input checked="" type="checkbox"/>
	Final Shut-in <u>100min</u>	Straddle _____

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Approved By Edwin Brewer
 Our Representative Paul Claster

Circ. Sub N/A
 Sampler _____
 Extra Packer _____
 Elect. Rec.
 Other _____
 TOTAL PRICE \$ _____

CEMENT JOB REPORT

ORIGINAL

CUSTOMER HNA CLARK	DATE 8-27-97	F.R.# 076812	SERV. SUPV. ALTON ALLEN
LEASE & WELL NAME-OCSG Thunder A # 2	LOCATION Sec 2-33.5-41SW	COUNTY-PARISH-BLOCK MCDONALD KANSAS	
DISTRICT Pawnee, Tex	DRILLING CONTRACTOR RIG # Cheyenne #7	TYPE OF JOB SURFACE	

SIZE & TYPE OF PLUGS		LIST-CSG-HARDWARE	PHYSICAL SLURRY PROPERTIES					
TOP	BTM		SLURRY WGT PPG	SLURRY YLD FT ³	WATER GPS	PUMP TIME HR:MIN	Bbl SLURRY	Bbl MIX WATER
8 3/4 Ribbon		19wids size 1 insord Ehat						
MATERIALS FURNISHED BY BJ								
270 SKS "C" + 16% gel + 3% silt + .25" SA cellu FIARE			11.4	3.39	20.63	2:00	163	133
100 SKS "C" + 2% CALC E + .25" SK cellu FIARE			14.8	1.34	6.33	2:00	23.8	15
Available Mix Water 160 Bbl.		Available Displ. Fluid 160 Bbl.	TOTAL				186.8	148

HOLE			TBG-CSG-D.P.			TBG-CSG-D.P.			COLLAR DEPTHS		
SIZE	% EXCESS	DEPTH	SIZE	WGT.	DEPTH	SIZE	WGT.	DEPTH	SHOE	FLOAT	STAGE
12 1/4		1506	8 3/8	23.4	1506	-	-	-	1506	1962	-

LAST CASING		PKR-CMT RET-BR PL-LINER		PERF. DEPTH		TOP CONN		WELL FLUID	
SIZE	WGT	DEPTH	DEPTH	TOP	BTM	SIZE	THREAD	TYPE	WGT.
-	-	-	-	-	-	-	-	-	-

CAL. DISPL. VOL.-Bbl.				CAL. PSI	CAL. MAX PSI	OP. MAX	MAX TBG PSI		MAX CSG PSI		DISPL. FLUID		WATER SOURCE
TBG	CSG	CSG.	TOTAL	BUMP PLUG	TO REV.	SQ. PSI	RATED	OP.	RATED	OP.	TYPE	WGT.	
-	93	-	93	275	-	-	-	-	1390	1072	H2O	8.24	0

EXPLANATION: TROUBLE SETTING TOOL, RUNNING CSG, ETC. PRIOR TO CEMENTING:

PRESSURE/RATE DETAIL						EXPLANATION	
TIME HR: MIN.	PRESSURE-PSI		RATE BPM	Bbl. FLUID PUMPED	FLUID TYPE	SAFETY MEETING: BJ CREW <input type="checkbox"/> CO. REP. <input type="checkbox"/>	
	PIPE	ANNULUS				TEST LINES	PSI
18:15	-	-	-	-	-	CIRCULATING WELL-RIG <input type="checkbox"/> BJ <input type="checkbox"/>	
19:15	-	-	-	-	-	20 min in annulus at 15:45	
17:30	-	-	-	-	-	2 day line to rig 11:00	
17:30	-	-	-	-	-	Safety meeting	
21:40	-	-	-	-	-	2:01 hand	
22:50	250	250	7	10	H2O	2:05 H2O mixed + pressure test	
22:53	250	250	7	163	CMF	2:07 hand	
23:15	150	150	-	15	CMF	2:09 hand	
23:20	-	-	-	-	-	2:11 hand + draw plug	
23:25	275	275	6	83	H2O	2:13 water cement	
23:40	450	450	2.5	10	H2O	2:15 water	
23:45	750	-	-	-	-	2:17 Runup plug + monitor float	
-	-	-	-	-	-	2:19 float set	

BUMPED PLUG	PSI TO BUMP PLUG	TEST FLOAT EQUIP.	Bbl. CMT RETURNS/ REVERSED	TOTAL Bbl. PUMPED	PSI LEFT ON CSG	SPOT TOP CEMENT	SERV. SUPV.
Y N	275	Y N	3	281		2500	<i>Alton Allen</i>



CEMENT JOB REPORT

ORIGINAL

CUSTOMER: Anadarko	DATE: 9-9-97	F.R.#: 419344	SERV. SUPV.: Maness
LEASE & WELL NAME-OCSG: Thurston A-2	LOCATION: Sec 2 Twp 33S-41W	COUNTY-PARISH-BLOCK: Morton Co. KS	
DISTRICT: Perrinton	DRILLING CONTRACTOR RIG #: Cheyenne 7	TYPE OF JOB: L/S	

SIZE & TYPE OF PLUGS		LIST-CSG-HARDWARE	PHYSICAL SLURRY PROPERTIES					
TOP	BTM		SLURRY WGT PPG	SLURRY YLD FT ³	WATER GPS	PUMP TIME HR:MIN	Bbl SLURRY	Bbl MIX WATER

MATERIALS FURNISHED BY BJ								
100 Sx 35/65 Poz H + 6% Gell + 5% Cacl ₂			12.8	1.80			32	23
90 Sx 1" H + 10% Gypsum + 10% Salt + 5% FL-52			14.9	1.51			24	15

Available Mix Water 50 Bbl.	Available Displ. Fluid 200 Bbl.	TOTAL	56	38
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HOLE			TBG-CSG-D.P.			TBG-CSG-D.P.			COLLAR DEPTHS				
SIZE	% EXCESS	DEPTH	SIZE	WGT.	TYPE	DEPTH	SIZE	WGT	TYPE	DEPTH	SHOE	FLOAT	STAGE
7 7/8		5964	5 1/2	10.5	K-55	5274					5274	5229	

LAST CASING				PKR-CMT RET-BR PL-LINER			PERF. DEPTH		TOP CONN		WELL FLUID	
SIZE	WGT	TYPE	DEPTH	BRAND & TYPE		DEPTH	TOP	BTM	SIZE	THREAD	TYPE	WGT
									5 1/2	8RD	mud	9.5

CAL. DISPL. VOL.-Bbl.				CAL. PSI	CAL. MAX PSI	OP. MAX	MAX TBG PSI		MAX CSG PSI		DISPL. FLUID		WATER SOURCE
TBG.	CSG.	CSG.	TOTAL	BUMP PLUG	TO REV.	SO. PSI	RATED	OP.	RATED	OP.	TYPE	WGT.	
	124		124	500							H ₂ O	8.3	Rig

EXPLANATION: TROUBLE SETTING TOOL, RUNNING CSG, ETC. PRIOR TO CEMENTING:

PRESSURE/RATE DETAIL						EXPLANATION	
TIME HR: MIN.	PRESSURE-PSI		RATE BPM	Bbl. FLUID PUMPED	FLUID TYPE	SAFETY MEETING: BJ CREW <input checked="" type="checkbox"/> CO. REP. <input type="checkbox"/>	
	PIPE	ANNULUS				TEST LINES	
11:30							CIRCULATING WELL-RIG <input checked="" type="checkbox"/> BJ <input type="checkbox"/>
5:24							ARRIVE on loc SPOT TRUCKS
11:50							lay. line TO Rig
5:00							Hook Rig TO Circ
5:20							Hook Pump TO CSG
5:20	-		5	8	H ₂ O		Start water
5:30	100		5	10	SB		Start Shore band
5:30	100		5	8	H ₂ O		Start water
5:42	100		5	32	Slurry		Start lead
5:48	-		5	24	Slurry		Start Tail
5:54	-		-	-	Slurry		Finish Cmt shut down
5:55	-		3-4	5	H ₂ O		Wash P+L
5:59	0-500		3-6	114	H ₂ O		drop plug start disp
6:17	500		2	10	H ₂ O		Slow Rate
6:21	1200		2	-	H ₂ O		Bump Plug

BUMPED PLUG	PSI TO BUMP PLUG	TEST FLOAT EQUIP.	Bbl. CMT RETURNS/ REVERSED	TOTAL Bbl. PUMPED	PSI LEFT ON CSG	SPOT TOP CEMENT	SERV. SUPV.
<input checked="" type="checkbox"/> N	1200	<input checked="" type="checkbox"/> N	-	211			Bobby Maness



CEMENT JOB REPORT

ORIGINAL

CUSTOMER <i>Andarko</i>	DATE <i>10-1-99</i>	F.R.# <i>086453</i>	SERV. SUPV. <i>Sheets</i>
LEASE & WELL NAME-OCSE <i>1 Huron A-2</i>	LOCATION <i>Sec 2 33S 44W</i>	COUNTY-PARISH-BLOCK <i>Montgomery KS</i>	
DISTRICT <i>Perryton</i>	DRILLING CONTRACTOR RIG #	TYPE OF JOB <i>Source</i>	

SIZE & TYPE OF PLUGS		LIST-CSG-HARDWARE	PHYSICAL SLURRY PROPERTIES					
TOP	BTM		SLURRY WGT. PPG	SLURRY YLD FT ³	WATER GPS	PUMP TIME HR:MIN	Bbl SLURRY	Bbl MIX WATER
MATERIALS FURNISHED BY BJ								
<i>100 SKS H + 10% S.C.H + 10% Gypsum</i>			<i>14.9</i>	<i>1.51</i>	<i>7.1</i>		<i>27</i>	<i>17</i>
<i>1.5% FL-52 + .25#/SK Cello-Flake</i>								
<i>151 FT³</i>								
Available Mix Water		Bbl.	Available Displ. Fluid		Bbl.	TOTAL		

HOLE			TBG-CSG-D.P.			TBG-CSG-D.P.			COLLAR DEPTHS				
SIZE	% EXCESS	DEPTH	SIZE	WGT.	TYPE	DEPTH	SIZE	WGT.	TYPE	DEPTH	SHOE	FLOAT	STAGE
			<i>2 3/8"</i>	<i>4.7</i>	<i>8"</i>	<i>5170'</i>							
LAST CASING			PKR-CMT RET-BR PL-LINER			PERF. DEPTH		TOP CONN		WELL FLUID			
SIZE	WGT.	TYPE	DEPTH	BRAND & TYPE		DEPTH	TOP	BTM	SIZE	THREAD	TYPE	WGT.	
<i>5/8</i>	<i>15.5</i>	<i>M-50</i>	<i>5222'</i>	<i>Retainer</i>		<i>5170'</i>	<i>5200'</i>	<i>5204'</i>	<i>2 3/8"</i>	<i>8"</i>	<i>H2O</i>	<i>8.4</i>	
CAL DISPL VOL-Bbl.				CAL PSI	CAL MAX PSI	OP. MAX	MAX TBG PSI		MAX CSG PSI		DISPL FLUID		WATER SOURCE
TBG.	CSG.	CSG.	TOTAL	BUMP PLUG	TO REV.	SQ. PSI	RATED	OP.	RATED	OP.	TYPE	WGT.	
<i>2a</i>	<i>.07</i>										<i>H2O</i>	<i>8.4</i>	<i>1.1</i>

EXPLANATION: TROUBLE SETTING TOOL, RUNNING CSG, ETC. PRIOR TO CEMENTING:

PRESSURE/RATE DETAIL						EXPLANATION	
TIME HR: MIN.	PRESSURE-PSI		RATE BPM	Bbl. FLUID PUMPED	FLUID TYPE	SAFETY MEETING: BJ CREW <input checked="" type="checkbox"/> CO. REP. <input checked="" type="checkbox"/>	
	PIPE	ANNULUS				TEST LINES	2000 PSI
<i>12:30</i>						<input type="checkbox"/> CIRCULATING WELL-RIG <input type="checkbox"/> BJ <input type="checkbox"/>	
						<i>On location soft, injection 2000 PSI</i>	
						<i>Lay line to source, 2000 PSI</i>	
<i>14:47</i>	<i>2000</i>					<i>Hook Pump to tubing - 7000 PSI</i>	
<i>14:49</i>	<i>500</i>	<i>500</i>	<i>5</i>	<i>34</i>	<i>H2O</i>	<i>Load Annulus</i>	
<i>13:63</i>	<i>800</i>		<i>2</i>	<i>75</i>	<i>H2O</i>	<i>Load Tubing Injection Rate</i>	
<i>15:09</i>	<i>500</i>		<i>2</i>	<i>29</i>	<i>H2O</i>	<i>Start Cement</i>	
<i>15:27</i>	<i>-</i>		<i>-</i>	<i>27</i>	<i>H</i>	<i>All Cement Shutdown, wash P&L</i>	
<i>15:30</i>	<i>1700</i>		<i>.07</i>		<i>H2O</i>	<i>Start Displacement</i>	
<i>15:49</i>	<i>1500</i>		<i>.15</i>	<i>195</i>	<i>H2O</i>	<i>Shutdown</i>	
<i>15:50</i>	<i>250</i>		<i>2.5</i>		<i>H2O</i>	<i>Reverse Tubing</i>	
<i>15:59</i>	<i>-</i>		<i>-</i>	<i>23</i>	<i>H2O</i>	<i>Shutdown</i>	

BUMPED PLUG	PSI TO BUMP PLUG	TEST FLOAT EQUIP.	Bbl. CMT RETURNS/ REVERSED	TOTAL Bbl. PUMPED	PSI LEFT ON CSG	SPOT TOP CEMENT	SERV. SUPV. <i>Sheets</i>
Y N		Y N	<i>03</i>				

TICKET #
234921

 TICKET DATE
10-14-97

REGION North America	HW/COUNTRY Mid Continent	BDA / STATE KS	COUNTY Morton
MBU ID / EMP # LTO01 63601	EMPLOYEE NAME D. McKane	PSL DEPARTMENT Cement	CUSTOMER REP / PHONE
LOCATION L. Local	COMPANY Anadarko Petroleum	API / UWI #	ORIGINAL
TICKET AMOUNT	WELL TYPE 02	JOB PURPOSE CODE 205	
WELL LOCATION Land	DEPARTMENT Cement		
LEASE / WELL # Thruway A-2	SEC / TWP / RNG		

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
E. McLaughlin 44285			
C. Ashby 44051			

HES UNIT NUMBERS	R/T MILES	HES UNIT NUMBERS	R/T MILES	HES UNIT NUMBERS	R/T MILES	HES UNIT NUMBERS	R/T MILES
4273-45	122						
42947-75475	122						
41984-7753	10						

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

DATE	CALLED OUT	ON LOCATION	JOB STARTED	JOB COMPLETED
	10-14-97	10-14-97		
TIME	1145			

TOOLS AND ACCESSORIES

TYPE AND SIZE	QTY	MAKE
Float Collar		
Float Shoe		
Gulde Shoe		
Centralizers		
Bottom Plug		
Top Plug		
Head		
Packer		
Other		

WELL DATA

	NEW/USED	WEIGHT	SIZE	FROM	TO	MAX ALLOW
Casing	u	15.5	5 1/2	GL	5600	
Liner						
Liner						
Tbg/D.P.	u	4.6	2 1/2	GL	4625	
Tbg/D.P.						
Open Hole						SHOTS/FT.
Perforations						
Perforations						
Perforations						

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		

HOURS ON LOCATION		OPERATING HOURS		DESCRIPTION OF JOB
DATE	HOURS	DATE	HOURS	
				10/14/97 11:45 AM 1:15 PM 2:45 PM 4:15 PM 5:45 PM 7:15 PM 8:45 PM 10:15 PM 11:45 PM 12:15 AM
TOTAL		TOTAL		

ORDERED	HYDRAULIC HORSEPOWER Avall.	Used.
TREATED	AVERAGE RATES IN BPM Disp.	Overall
FEET	CEMENT LEFT IN PIPE Reason	

CEMENT DATA

STAGE	SACKS	CEMENT	BULK/SKS	ADDITIVES	YIELD	LBS/GAL
	125	1-100 lb	13	75% Hal-322 10% S-11 4% P/S 3% S-1000	129	149

Circulating _____	Displacement _____	Prollush. _____	Gal - BBI _____	Type _____
Breakdown _____	Maximum _____	Load & Bkdn: _____	Gal - BBI _____	Pad: BBI - Gal _____
Average _____	Frac Gradient _____	Treatment _____	Gal - BBI _____	Disp: BBI - Gal _____
Shut In: Instant _____	5 Min _____ 15 Min _____	Cement Slurr _____	Gal - BBI 53.5	
		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 _____

WELL NO / EMP #	EMPLOYEE NAME	PSL DEPARTMENT	
11-701	Dr. McDaniel		
LOCATION	COMPANY	CUSTOMER REF / PHONE	
	Arctic No. 1		
TICKET AMOUNT	WELL TYPE	AP / UNIT	
WELL LOCATION	DEPARTMENT	JOB PURPOSE CODE	
11-701	Concrete		
LEASE / WELL #	SEC / TWP / RING		
Throu A-2	2		
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

CHART NO.	TIME	RATE (GPM)	VOLUME (BBL)(GAL)	PUMPS		PRESS. (PSI)		JOB DESCRIPTION / REMARKS
				T	C	Tbg	Cog	
	09:00							Called out
	13:30							wait
	13:30							Requested pilot
	13:55							Start with Express Bridge Plug in Well
	14:31							Set Express out 50 50
	14:55				✓			Load Hole with Material
	15:10							Run 2 SR Seals on Top of Bridge Plug
	16:00							Start FW at 4018
	16:15	6	176		✓		200	Rig up to 29' depth with NO Ret. at
	16:45							Start down
	16:56							Start in W ELSV - 4 Set at 2462'
	17:40							Start Standpipe on Hole
	18:30							Top of Bottom
	18:38		6 1/2		✓		200	Load BS
	18:44	3	5		✓		500	1st Rate Down the
	18:48	3			✓		450	mid amt
	19:00		35 1/2		✓			Finish Standpipe
	19:01							Wash Craft line of Pit
	19:05	2	17		✓		1000	Disp
	19:12	2	17				8000	Finish Disposition out of ELSV
	19:13							Red out
	19:22							Shut down
	19:25							Pull Tbg

ORIGINAL

CIR at Bbl cont top

11-17
HED
PP
COMM