

ORIGINAL

SIDE ONE

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

Operator: License # 05398

Name: ARCO Oil & Gas Company

Address Box 1610

City/State/Zip Midland, TX 79702

Purchaser: Diamond Shamrock

Operator Contact Person: Ken W. Gosnell

Phone ( 915 ) 688-5672

Contractor: Name: Triad Drlg. Co.

License: 07345

Wellsite Geologist: Ben Francka

Designate Type of Completion  
 New Well  Re-Entry  Workover  
 Oil  SWD  Temp. Abd.  
 Gas  Inj  Delayed Comp.  
 Dry  Other (Core, Water Supply, etc.)

If **OWO**: old well info as follows:  
Operator: \_\_\_\_\_

Well Name: \_\_\_\_\_

Comp. Date \_\_\_\_\_ Old Total Depth \_\_\_\_\_

Drilling Method:  
 Mud Rotary  Air Rotary  Cable

8-26-90 9-4-90 10-8-90  
Spud Date Date Reached TD Completion Date

API NO. 15- 067-21084-0000

County Grant

NE NE NW Sec. 31 Twp. 29 Rge. 38  East West

4950 Ft. North from Southeast Corner of Section

2971.8 Ft. West from Southeast Corner of Section  
(NOTE: Locate well in section plat below.)

Lease Name Bailey Well # 1

Field Name Big Bow

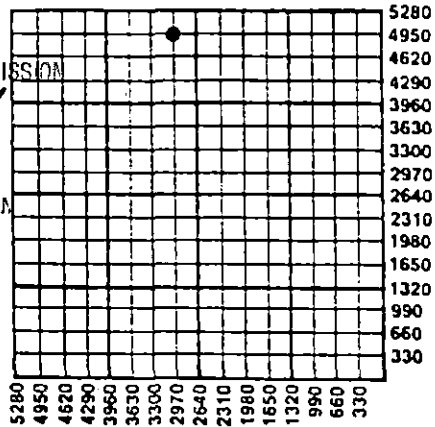
Producing Formation St. Louis

Elevation: Ground 3107 KB \_\_\_\_\_

Total Depth 5800 PBDT 5713

RECEIVED  
STATE CORPORATION COMMISSION  
3-26-91  
MAR 26 1991

CONSERVATION DIVISION  
Wichita, Kansas



Amount of Surface Pipe Set and Cemented at 1830 Feet

Multiple Stage Cementing Collar Used?  Yes  No

If yes, show depth set 3014 Feet

If Alternate II completion, cement circulated from \_\_\_\_\_

feet depth to \_\_\_\_\_ w/ \_\_\_\_\_ sx cmt.

INSTRUCTIONS: This form shall be completed in triplicate and filed with the Kansas Corporation Commission, 200 Colorado Derby Building, Wichita, Kansas 67202, within 120 days of the spud date of any well. Rule 82-3-130, 82-3-107 and 82-3-106 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 drillers time log 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. Any recompletion, workover or conversion of a well requires filing of ACO-2 within 120 days from commencement date of such work.

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 Ken W. Gosnell

Title Regulatory Coordinator Date 3-20-91

Subscribed and sworn to before me this 20th day of March

Notary Public LISA A. GORDY  
Notary Public, State of Texas  
Date Commission Expires 6-6-92

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

SIDE TWO

Operator Name ARCO Oil & Gas Company Lease Name Bailey Well # 1  
 Sec. 31 Twp. 29 Rge. 38  East County Grant  
 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 (Attach Additional Sheets.)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Formation	<input checked="" type="checkbox"/> Log	<input type="checkbox"/> Sample
Samples Sent to Geological Survey	<input type="checkbox"/> Yes <input type="checkbox"/> No	Name	Top	
Cores Taken	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Chase	2297	
Electric Log Run (Submit Copy.)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Council Grove	2588	
		Lansing	3870	
		Marmton	4440	
		Morrow	5140	
		Chester	5485	
		St. Geniveive	5567	
		St. Louis	5606	

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	12 1/4	8 5/8	24	1830	RFC	900	2%CC&1/4#FC
Production	7 7/8	5 1/2	15.5	5800	Poz	825	1/4#FC
PERFORATION RECORD				Acid, Fracture, Shot, Cement Squeeze Record			
Shots Per Foot	Specify Footage of Each Interval Perforated			Depth			(Amount and Kind of Material Used)
4	5666-5668, 5654-5660						
TUBING RECORD				Liner Run <input type="checkbox"/> Yes <input type="checkbox"/> No			
Size		Set At	Packer At				
2 7/8		5590					
Date of First Production	Producing Method <input type="checkbox"/> Flowing <input checked="" type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other (Explain)						
10-8-90							
Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio		Gravity	
	365	0	86			44	

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

METHOD OF COMPLETION:  Open Hole  Perforation  Dually Completed  Commingled  Other (Specify) \_\_\_\_\_

Production Interval: 5654-5668

"Night" Hole

Danny Daes

West Area

ARCO Oil and Gas Company

ORIGINAL

Daily Drilling Report

AFE No. 940437	Rpt. No. 12	Date 9-7-90	Supv. Init. BJB
Well Bailey #1	Last Csg 5 1/2 5800	Shoe test	Days since spud/est. 12
Contractor Third Rig 14	Depth	Depth Yesterday	Progress
Operation @ 0800 Riggings DV	Daily cost 3214	Accum. Cost 197966	Est. cost to date
Next casing	Hours on jars	Barite	Cement
		ex	ex
			Fuel
			Drig Water
			gal
			bbbl

MUD DATA		BIT DATA		MUD LOG DATA		DRILLING AND PUMP DATA			
Mud type	MBT	Bit No.		Depth		Depth	Rot. Wt.	K#	
Weight	ppg	pH		Mud Wt.	ppg	P.U. Wt.	K#	S.O. Wt.	K#
Viscosity	cp	Make	RECEIVED	Formation		Avg. Drag	K#	Max. Drag	K#
PVWP	PI	STATE CO	OPERATION DIVISION	Background gas	u	Trq. Btm.	ft-lb.	Trq. Off.	ft-lb.
Gels	MI	Serial No.		Conn. gas	u	Pump No.	1	2	
API W.L.	Chlorides	Depth Out	APR 12 1991	Trip gas	u	Liner size	in.	in.	
HTHP 100 psi	OIL	Footage	CONSERVATION DIVISION	Max BGG	u	SPM (1)	spm	spm	
HTHP 500 psi	OWR	Hours	Wichita, Kansas	DC Exponent		Press. (1)	psi	psi	
Solids	ES	WOB	1 K#	Shale density		SPM (2)	spm	spm	
Sand	LGS	RPM	rpm	Est. pore press		Press. (2)	psi	psi	
Hole Vol.	Pit vol.	Dull		ROP/Shale	fph	Slow P.S.	spm	spm	
Daily Mud \$	Total Mud \$	Grade		ROP/Sand	fph	Slow P.P	psi	psi	

Accidents ?	Jots/TFA	Signed
Who ? NONE	Bill Cost	B. B. Baird
SURV. NO.		
DEPTH (MD)		
ANGLE		
DIRECTION		

TIME	HOURS	OPERATIONS FROM 0800 to 0800
0600-0700	1	2nd Stage Through DV Tool @ 3014 Preceded Cement w/ 20 Bbls F.W., 20 Bbls Scavenger, Cemented w/ 150 sks 35/64 POC w/ 690 D-20, 12590 D-60 & 1/4" SK D-29. Slurry 12.7, yield 1.82, H2O 10.4 Tail: 300 sks 50/50 POC 290 D-20, 1/4" SK D-29 Cir. w/ Full Returns. Bump Plug & Close DV Tool @ 2200" DV Tool Held OK.
0700-0945	2 3/4	Pick BOP up. Set slips w/ 70,000. Rough cut 5 1/2" @ 59.
		Big Released @ 0945 9-6-90
		Riggings DV.
	3 3/4	

AND DRILLSTRING DESCRIPTION (TOP TO BOTTOM)

BHA No.	NO. JTS.	ITEM(S)	LENGTH	O.D.	I.D.	WT/FT	GRADE	CONNECTION	FISHING NECK
LENGTH									
WEIGHT (AIR)									
WEIGHT (MUD)									
HRS. (INSPECT)									
TOTAL ROT. HRS.									
INSPECTION REMARKS									
DC		Drill Collar							
MDC		Monel DC							
SPDC		Spiral DC							
SQDC		Square Drill Collar							
PDC		Pony DC							
DP		Drill Pipe							
HWDP		Hevi-Wate DP							
XC		Crossover							
WBS		Weld Blade Stabilizer							
IBS		Int. Blade Stabilizer							
SSTB		Sleeve Stabilizer							
NMST		Non-Magnetic Stab.							
NBS		Near Bit Stabilizer							
ES		Mule Shoe							
RR		Roller Reamer							
RMR		Reamer							
RWP		Removable Wear Pad							
HO		Hole Opener							
UR		Under Reamer							
SKW		Spiral Keyseat Wiper							
KSW		Keyseat Wiper							
SS		Shock Sub							
JAR		Jars							
CB		Core Barrel							
MWD		MWD							
BIT		Bit							
SUB		Sub							
PDM		Pos. Dip. Motor							
TUR		Turbine							
JB		Junk Basket							
FBHG		Fishing Tools							
FB		Float sub							
PRS		Pressure relief Sub							
B-		Bent Sub (show angle)							

TIME	HOURS	OPERATIONS (CONTINUED)

WELL NAME:

DATE:

SIGNED:

Tight Hole

Nanny Daes ORIGINAL

West Area, Daily Drilling Report

ARCO Oil and Gas Company

A/E No. 940437	Rpt. No. 11	Date 9-6-90	Supv. Init. BJB
Well Bailey #1	Last Csg 5 1/2 @ 5800	Shoe test	Days since spud/est. 11
Contractor Triad Rig 14	Depth 5800	Depth Yesterday 5800	Progress - BOP test 8-28-90
Operation @ 0800 Cit. Through DV Tool	Daily cost 71944	Accum. Cost 194752	Est. cost to date 170000
Next casing	Hours on jars None	Barite	Cement
			Fuel
			Drig Water

MUD DATA		BIT DATA		MUD LOG DATA		DRILLING AND PUMP DATA			
Mud type LUSD	MBT 18.75	Bit No. 3 RR		Depth	Depth	Rot. Wt. K#			
Weight 9.0 ppg	pH 9.0	Size 7 7/8		Mud Wt. PPG	P.U. Wt. K#	S.O. Wt. K#			
Viscosity 50	Pm .3	Make Sec		Formation	Avg. Drag K#	Max. Drag K#			
PVVP 19-16	PI .2	Type 584 F		Background gas u	Trq. Btm. ft-lb.	Trq. Off. ft-lb.			
Gels 8/18	MI 1.1	Serial No. 529309		Conn. gas u	Pump No. 1	2			
API W.L. 6.4	Chlorides 1000 ppm	Depth Out		Trip gas u	Liner size in.				
HHP 100 psi	Oil %	Footage Cond ft		Max BGG u	SPM (1) spm				
HHP 500 psi	OWR	Hours For hrs		DC Exponent	Press. (1) psi				
Solids 4.0	ES	WOB Csg. K#		Shale density	SPM (2) spm				
Sand 175	LGS UGM 4 #	RPM Only rpm		Est. pore press	Press. (2) psi				
Hole Vol.	Pit vol. 400 bbl	Dull		ROP/Shale fph	Slow P.S. spm				
Daily Mud \$ -	Total Mud \$ 8915	Grade		ROP/Sand fph	Slow P.P. psi				

Accidents ?	Jets/TFA 3-12	Signed BJB
Who ? NONE	Bit Cost	
RECEIVED		
STATE CORPORATION COMMISSION		
APR 12 1991		
CONSERVATION DIVISION		

TIME	HOURS	OPERATIONS FROM 0800 to 0600
0600-0815	2 1/4	Finish Running logs. DIL/BHC/Sonic/GR/5P/CAL & LDT/CNL/NGT/micro.
0815-0945	1 1/2	Trip In Hole
0945-1330	3 3/4	Cit.
1330-1830	5	lay DP & Collars Dn. + Break Kelly.
1830-1915	3/4	Rig up Csg Crew, Change to 5 1/2" Rams
1915-2300	3 3/4	Pick up Gumco F.S., 2-Jts 5 1/2" Csg, 2-Jts 5 1/2" Csg, 1-Short Jt, 59 Jts 5 1/2" Csg, DV Tool (Basket) Jt Below & 69 Jts 5 1/2" Csg. w/ 10 Centralizers.
2300-2330	1/2	Cit. @ 6 BPM @ 250' shoe @ 5800, F.C. @ 5713' D.V. Tool @ 3014'
2330-0045	1 1/4	Cemented w/ 375 SKs RFC. Lost Returns w/ 50 Bbls. Displacement Gone. Bump Plug 1600 # 140 Bbls. Floats Held OK.
0045-0100	1/4	Drop Bomb, open DV Tool 750 #, Regain Cit. w/ 3 Bbls Gone.
0100-0600	5	Cit. Through DV Tool @ 150' @ 5BPM.
	24	



Tight Hole

Danny ORIGINAL

West Area

ARCO Oil and GAS COMPANY  
CASING AND CEMENTING REPORT

WELL Bailey #1 AFE NO 940437 DATE 9-5-90

CASING STRING: COND/SURF/P1/P2/P3/P4/PROD (CIRCLE ONE)

MD: 5800 TVD 5800 BIT SIZE 7 7/8 OPEN HOLE VOLUME 360 FT<sup>3</sup>

MUD PROPERTIES: TYPE MUD LSND MW 9.0 PV/YP 19-16

API W.L. 6.4, HTHP @ 300 °F \_\_\_\_\_, LB/BBL LIGNOSULFONATE \_\_\_\_\_

BHLT: \_\_\_\_\_ °F TIME SINCE CIRCULATING \_\_\_\_\_ HRS BHST: \_\_\_\_\_ °F

MUD FLOWLINE TEMP: \_\_\_\_\_ °F MUD SUCTION TEMP: \_\_\_\_\_ °F SURFACE TEMP: \_\_\_\_\_ °F

HOLE PROBLEMS ENCOUNTERED WHILE DRILLING (HIGH GAS, LOST CIRC, TIGHT HOLE, OTHER)

I. CASING DETAIL FULL STRING/LINER

CASING DESCRIPTION (BOTTOM TO TOP)

SIZE (O.D.)	LENGTH	NO. OF JOINTS	BOTTOM DEPTH	TOP DEPTH	WEIGHT	GRADE	CONNECTION	I.D.	TORQUE (FT. LBS.)
<u>5 1/2</u>	<u>3633.71</u>	<u>69</u>	<u>3014.04</u>	<u>-19.67</u>	<u>15.50</u>	<u>K-55</u>	<u>8RD</u>	<u>4.950</u>	<u>2500</u>
<u>DV Tool</u>	<u>2.10</u>		<u>3012.14</u>	<u>3014.04</u>			<u>8RD</u>		<u>3000</u>
<u>5 1/2</u>	<u>2591.39</u>	<u>59</u>	<u>5607.53</u>	<u>3016.14</u>	<u>15.50</u>	<u>K-55</u>	<u>8RD</u>	<u>4.950</u>	<u>2500</u>
<u>5 1/2</u>	<u>19.34</u>	<u>1</u>	<u>5626.87</u>	<u>5707.53</u>	<u>15.50</u>	<u>K-55</u>	<u>8RD</u>	<u>4.950</u>	<u>2500</u>
<u>5 1/2</u>	<u>86.40</u>	<u>2</u>	<u>5713.27</u>	<u>5626.87</u>	<u>15.50</u>	<u>K-55</u>	<u>8RD</u>	<u>4.950</u>	<u>2500</u>
<u>F.C.</u>	<u>1.25</u>		<u>5714.52</u>	<u>5713.27</u>			<u>8RD</u>		<u>3000</u>
<u>5 1/2</u>	<u>84.03</u>	<u>2</u>	<u>5798.55</u>	<u>5714.52</u>	<u>15.50</u>	<u>K-55</u>	<u>8RD</u>	<u>4.950</u>	<u>3000</u>
<u>F.S.</u>	<u>1.45</u>		<u>5800.00</u>	<u>5798.55</u>			<u>8RD</u>		<u>3000</u>

5819.67 133

TOTAL PIPE RUN IN HOLE

- 34.67

LESS CUTOFF PIPE

5785.00

TOTAL PIPE TALLY LEFT IN HOLE

+ 15.00

RKB TO CUTOFF

5800.00

TOTAL SETTING DEPTH

LINER HANGER COMPANY (MWL, TIW, BOT, OTIS, OTHER, NONE)

SUCCESS (Y/N)

CENTRALIZERS: MANUFACTURER Gemco TYPE \_\_\_\_\_ NUMBER RUN 10

PLACEMENT (DEPTHS): 5785 5716 5674 5542 5407 5271  
5141 5016 3050 2970' Basket @ 3020'

OTHER CEMENTING AIDES: \_\_\_\_\_

ATTACH PIPE TALLY

FRM226

II. PRIMARY CEMENTING DETAIL CEMENTING CO: (HOWCO, DOWELL, BJ, WESTERN)

LEAD: TYPE: RF VOL: 375 SX WT: 14.7 PPG YIELD 1.49 FT<sup>3</sup>/SK MIX WTR 6.97 GAL/SK  
ADDITIVES: \_\_\_\_\_

LAB MEASUREMENTS: 12/24 HR. COMPRESSIVE STRENGTH \_\_\_\_\_ PSI/ \_\_\_\_\_ PSI AT \_\_\_\_\_ °F  
BHCT \_\_\_\_\_ °F API W.L. \_\_\_\_\_ CC/30MIN FREE WATER \_\_\_\_\_ % N' \_\_\_\_\_ K' \_\_\_\_\_  
THICKENING TIME (100UC) \_\_\_\_\_ HRS, PUMPING TIME (70 UC) \_\_\_\_\_ HRS, 20MIN UC TEST \_\_\_\_\_ UC

TAIL: TYPE: \_\_\_\_\_ VOL: \_\_\_\_\_ SX WT: \_\_\_\_\_ PPG YIELD \_\_\_\_\_ FT<sup>3</sup>/SK MIX WTR \_\_\_\_\_ GAL/SK  
ADDITIVES: \_\_\_\_\_

LAB MEASUREMENTS: 12/24 HR. COMPRESSIVE STRENGTH \_\_\_\_\_ PSI/ \_\_\_\_\_ PSI AT \_\_\_\_\_ °F  
BHCT \_\_\_\_\_ °F API W.L. \_\_\_\_\_ CC/30MIN FREE WATER \_\_\_\_\_ % N' \_\_\_\_\_ K' \_\_\_\_\_  
THICKENING TIME (100VC) \_\_\_\_\_ HRS, PUMPING TIME (70 UC) \_\_\_\_\_ HRS, 20MIN UC TEST \_\_\_\_\_ UC

CONDITIONING TIME WITH CASING AT T.D. \_\_\_\_\_ HRS AT \_\_\_\_\_ BPM AND \_\_\_\_\_ PSI  
SPACER TYPE: \_\_\_\_\_ BBLs: \_\_\_\_\_ WT: \_\_\_\_\_ VISC: \_\_\_\_\_ PV/YP \_\_\_\_\_  
MIXED AND PUMPED \_\_\_\_\_ BBLs CEMENT FOR \_\_\_\_\_ HRS AT \_\_\_\_\_ BPM AND \_\_\_\_\_ PSI  
DISPLACED CEMENT WITH \_\_\_\_\_ BBLs FOR \_\_\_\_\_ HRS AT \_\_\_\_\_ BPM AND \_\_\_\_\_ PSI  
CALCULATED DISPLACEMENT \_\_\_\_\_ BBLs BUMPED PLUG (Y/N) \_\_\_\_\_ WITH \_\_\_\_\_ PSI (TOTAL)  
BATCH MIX CEMENT (Y/N) \_\_\_\_\_ RETURNS (FULL, PARTIAL, NONE) \_\_\_\_\_ RECIPROCATED PIPE (Y/N) \_\_\_\_\_  
CEMENT TO SURFACE (Y/N) \_\_\_\_\_ CALCULATED TOC: \_\_\_\_\_ W/ \_\_\_\_\_ % EXCESS AND \_\_\_\_\_ HOLE SIZE

REMARKS: DV Tool:  
Lead Cement: 150 SKs 35/64 103/16 + 6% D-20, .25% D-60 +  
1/4" SK D-29. wt 12.7 yield 1.87, water 10.4  
Tail Cement: 300 SKs 50/50 103/16 + 2% D-20, 1/4" SK D-29  
wt 14.1 yield 1.26 water 5.80

TAG TOC AT \_\_\_\_\_ TESTED TOL TO \_\_\_\_\_ PPG TESTED SHOE TO \_\_\_\_\_ PPG  
SUCCESSFUL CEMENT JOB (Y/N) \_\_\_\_\_ SQUEEZE (TOL, SHOE, ZONE) \_\_\_\_\_ CBL BOND (GOOD/FAIR/POOR) \_\_\_\_\_  
STAGE JOB (Y/N) \_\_\_\_\_ DV TOOL AT \_\_\_\_\_ . IF SO, COMPLETE ANOTHER DETAIL FOR 2ND STAGE

II. SECONDARY CEMENT JOB CEMENTING CO: (HOWCO, DOWELL, BJ, WESTERN)

TYPE OF REMEDIAL WORK (SHOE/TOL/ZONE) \_\_\_\_\_ ATTEMPT NO: \_\_\_\_\_  
BREAKDOWN PRESSURE: \_\_\_\_\_ PSI AT RATE OF \_\_\_\_\_ BPM  
INJECTION PRESSURE: INITIAL \_\_\_\_\_ PSI AT \_\_\_\_\_ BPM, FINAL: \_\_\_\_\_ PSI AT \_\_\_\_\_ BPM  
TYPE SQUEEZE (RUNNING/HESITATION/DISPLACE & HOLD): \_\_\_\_\_, ISIP \_\_\_\_\_ PSI  
HELD \_\_\_\_\_ PSI FOR \_\_\_\_\_ HRS. HAD \_\_\_\_\_ BBLs. BLEED BACK  
SLURRY: TYPE: \_\_\_\_\_ VOL: \_\_\_\_\_ SX WT: \_\_\_\_\_ PPG YIELD \_\_\_\_\_ FT<sup>3</sup>/SK MIX WTR \_\_\_\_\_ GAL/SK  
ADDITIVES: \_\_\_\_\_

SUCCESSFUL SQUEEZE JOB (Y/N) \_\_\_\_\_ TESTED SHOE TO \_\_\_\_\_ PPG TESTED TOL TO \_\_\_\_\_ PPG

REMARKS: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_