

**STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION**

**APPLICATION OF CIMAREX ENERGY CO.
FOR A NON-STANDARD OIL SPACING AND
PRORATION UNIT AND FOR COMPULSORY
POOLING, LEA COUNTY, NEW MEXICO.**

Case No. 13996

AFFIDAVIT OF DAN SPANCERS

CITY AND COUNTY OF DENVER)
) ss.
STATE OF COLORADO)

Dan Spancers, being duly sworn upon his oath, deposes and states:

1. I am over the age of 18, and have personal knowledge of the matters stated herein.
2. I am a geologist for Cimarex Energy Co. ("Cimarex").
3. Exhibit A is a plat of the Denton field, a Wolfcamp and Devonian field discovered in 1949. Cimarex is attempting to extend the productive portion of the field to the east and southeast.
4. Exhibit B is a structure map on top of the Wolfcamp formation. The Wolfcamp dips gently to the northeast. Exhibit B also contains production data from older, vertical wells in the pool.
5. The proposed well is moving downdip, and there is a thinner Wolfcamp section in the proposed well. Exhibit C is a type log from an older, vertical well. The pay being tested in the horizontal well is indicated on the type log.
6. Both quarter-quarter sections in the well are prospective in the Wolfcamp, and Cimarex anticipates producing reserves from each quarter-quarter section.
7. Exhibit D is a directional drilling plan for the well. Vertical wells would not be economic, due to the thinner pay section available to such a well. A horizontal wellbore will test a greater reservoir length, increasing the chances for an economic completion.

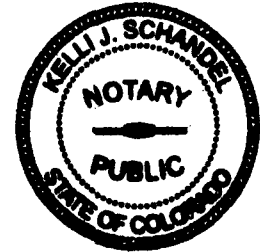
Oil Conservation Division
Case No. _____
Exhibit No. 2

Dan Spencers
Dan Spencers

SUBSCRIBED AND SWORN TO before me this 17th day of September, 2007 by Dan Spencers.

My Commission Expires: 8/23/09

Kelli Schandel
Notary Public



My Commission Expires Aug. 23, 2009

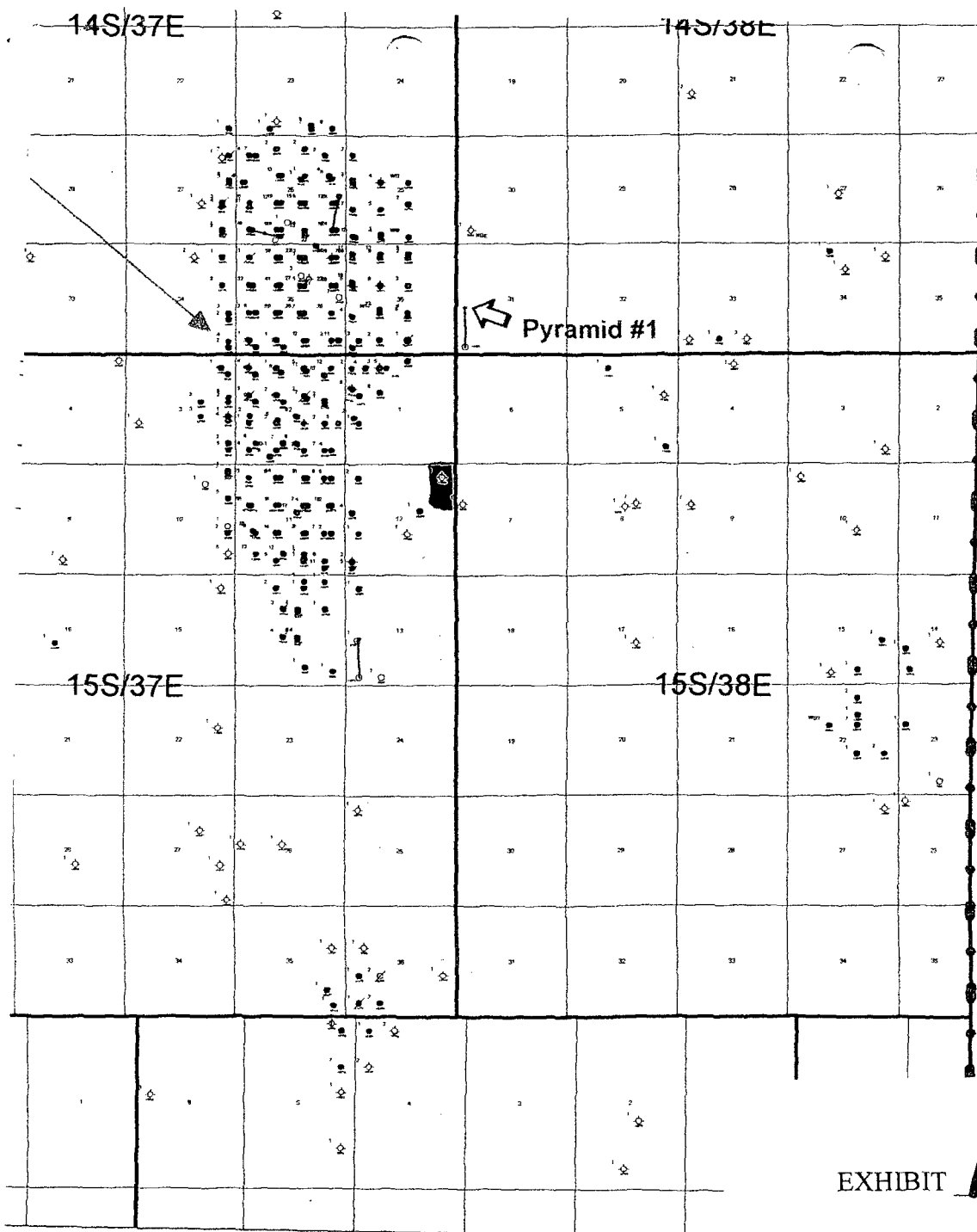


EXHIBIT **A**

ft

<i>Cimarex Energy Co.</i>		
Caudill / Denton Area Base Map Northern Lea Co, NM		
Author: Dave Rittersbacher	Date: 17 May, 2007	
Scale: 1"=8000'		

Type Log

Pyramid 80 acre unit

Pyramid #1

Lateral currently drilling

Harvard 6 Fee #2

proposed 80 acre unit

Sherman 13 Fee #3

proposed 80 acre unit

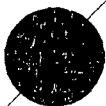
Sunshine #1

EXHIBIT

B

Type Log

30025052030000



SINCLAIR OIL & GAS
WT MANN 1
660FSL 2310FEL
TWP: 14 S - Range: 37 E - Sec. 36
Reference=ES
Datum=3797
Comp Date=8/4/1953

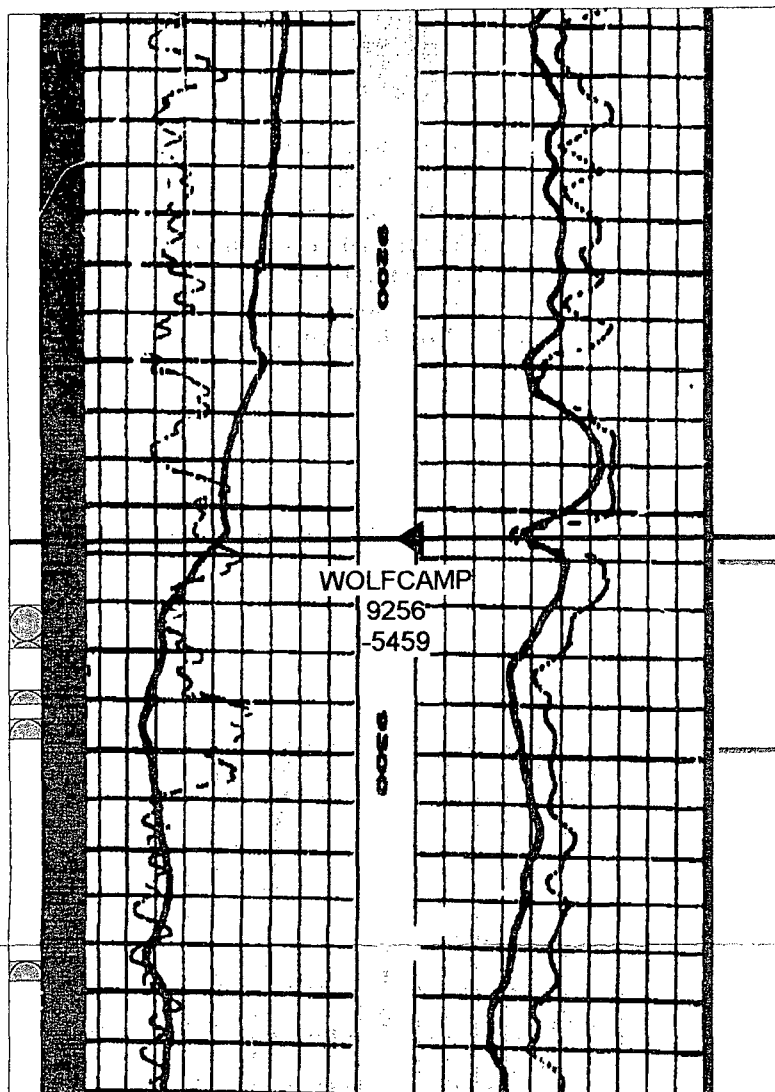
EXHIBIT C

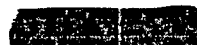
-5400

-5400

-5500

-5500




Horizontal
Target Zone

-5600

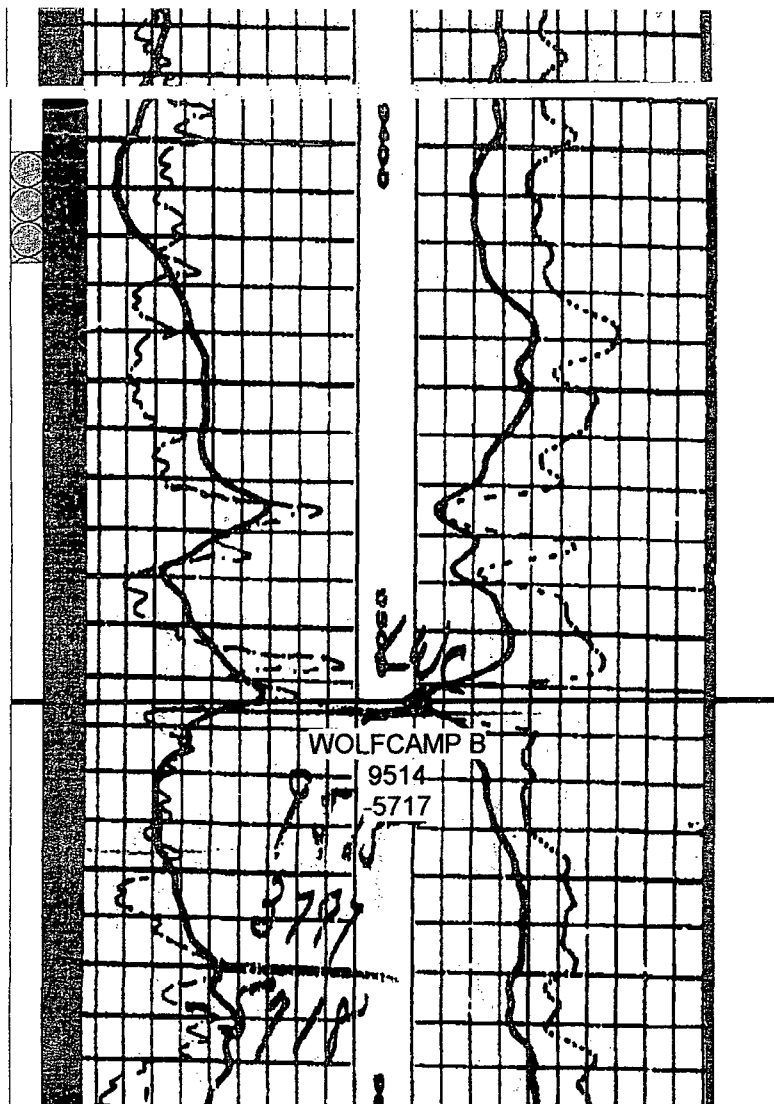
-5600

-5700

-5700

-5800

-5800



TD=12647

Completed in Devonian 1953, Acid 12,000G,
Cum. 402 MBO 48 MMCFG 93 MBW (1953-1973)

PB to Wolfcamp 1973, Acid 6500G
Cum 63 MBO 26 MMCFG 38 MBW (1973-1988)

Converted to Water Injection Injection 1988



Cimarex Energy Co., Inc.

Lea County (NAD 83)

Sherman '13' Fee #3H

Sherman '13' Fee #3H

Lateral #1

Plan: Plan #1

Standard Survey Report

06 August, 2007



EXHIBIT

D



Black Viper Energy Survey Report



Company:	Cimarex Energy Co., Inc.	Local Co-ordinate Reference:	Well Sherman '13' Fee #3H
Project:	Lea County (NAD 83)	TVD Reference:	WELL @ 3776.00ft (Original Well Elev)
Site:	Sherman '13' Fee #3H	MD Reference:	WELL @ 3776.00ft (Original Well Elev)
Well:	Sherman '13' Fee #3H	North Reference:	Grid
Wellbore:	Lateral #1	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	EDM 2003.14.1.0 Server DB

Project	Lea County (NAD 83)		
Map System:	US State Plane 1983	System Datum:	Ground Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Sherman '13' Fee #3H		
Site Position:	Northings:	738,097.50 ft	Latitude: 33° 1' 24.165 N
From: Map	Easting:	905,121.21 ft	Longitude: 103° 8' 47.259 W
Position Uncertainty:	Slot Radius:	"	Grid Convergence: 0.65 °

Well	Sherman '13' Fee #3H		
Well Position	+N/-S	0.00 ft	Northings: 738,097.50 ft
	+E/-W	0.00 ft	Easting: 905,121.21 ft
Position Uncertainty		0.00 ft	Wellhead Elevation: ft

Wellbore	Lateral #1		
Magnetics	Model Name	Sample Date	Declination (°)
	IGRF200510	8/6/2007	7.90
			Dip Angle (°)
			61.11
			Field Strength (nT)
			49,526

Design	Plan #1		
Audit Notes:			
Version:	Phase:	PROTOTYPE	Tie On Depth: 9,203.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)
	0.00	0.00	0.00

Survey Tool Program	Date 8/6/2007		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name
9,203.00	11,191.92	Plan #1 (Lateral #1)	MWD
			Description
			MWD - Standard

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
9,203.01	0.00	0.00	9,203.01	0.00	0.00	0.00	0.00	0.00	0.00	
KOP - Build 30.0° / 100										
9,210.00	2.10	180.00	9,210.00	-0.13	0.00	0.13	30.00	30.00	0.00	
9,220.00	5.10	180.00	9,219.98	-0.75	0.00	0.75	30.00	30.00	0.00	
9,230.00	8.10	180.00	9,229.91	-1.90	0.00	1.90	30.00	30.00	0.00	
9,240.00	11.10	180.00	9,239.77	-3.57	0.00	3.57	30.00	30.00	0.00	
9,250.00	14.10	180.00	9,249.53	-5.75	0.00	5.75	30.00	30.00	0.00	
9,260.00	17.10	180.00	9,259.16	-8.44	0.00	8.44	30.00	30.00	0.00	
9,270.00	20.10	180.00	9,268.64	-11.63	0.00	11.63	30.00	30.00	0.00	
9,280.00	23.10	180.00	9,277.93	-15.31	0.00	15.31	30.00	30.00	0.00	
9,290.00	26.10	180.00	9,287.02	-19.47	0.00	19.47	30.00	30.00	0.00	
9,300.00	29.10	180.00	9,295.88	-24.10	0.00	24.10	30.00	30.00	0.00	
9,310.00	32.10	180.00	9,304.49	-29.19	0.00	29.19	30.00	30.00	0.00	



Black Viper Energy
Survey Report



Company: Cimarex Energy Co., Inc.
Project: Lea County (NAD 83)
Site: Sherman '13' Fee #3H
Well: Sherman '13' Fee #3H
Wellbore: Lateral #1
Design: Plan #1

Local Co-ordinate Reference: Well Sherman '13' Fee #3H
TVD Reference: WELL @ 3776.00ft (Original Well Elev)
MD Reference: WELL @ 3776.00ft (Original Well Elev)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 2003.14.1.0 Server DB

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
9,320.00	35.10	180.00	9,312.82	-34.72	0.00	34.72	30.00	30.00	0.00
9,330.00	38.10	180.00	9,320.85	-40.68	0.00	40.68	30.00	30.00	0.00
9,340.00	41.10	180.00	9,328.55	-47.06	0.00	47.06	30.00	30.00	0.00
9,350.00	44.10	180.00	9,335.91	-53.82	0.00	53.82	30.00	30.00	0.00
9,360.00	47.10	180.00	9,342.91	-60.97	0.00	60.97	30.00	30.00	0.00
9,363.10	48.03	180.00	9,345.00	-63.25	0.00	63.25	30.00	30.00	0.00
Wolfcamp									
9,370.00	50.10	180.00	9,349.52	-68.47	0.00	68.47	30.00	30.00	0.00
9,380.00	53.10	180.00	9,355.73	-76.30	0.00	76.30	30.00	30.00	0.00
9,390.00	56.10	180.00	9,361.53	-84.45	0.00	84.45	30.00	30.00	0.00
9,400.00	59.10	180.00	9,366.89	-92.89	0.00	92.89	30.00	30.00	0.00
9,410.00	62.10	180.00	9,371.79	-101.61	0.00	101.61	30.00	30.00	0.00
9,420.00	65.10	180.00	9,376.24	-110.56	0.00	110.56	30.00	30.00	0.00
9,430.00	68.10	180.00	9,380.21	-119.74	0.00	119.74	30.00	30.00	0.00
9,440.00	71.10	180.00	9,383.70	-129.11	0.00	129.11	30.00	30.00	0.00
9,450.00	74.10	180.00	9,386.69	-138.65	0.00	138.65	30.00	30.00	0.00
9,460.00	77.10	180.00	9,389.18	-148.33	0.00	148.33	30.00	30.00	0.00
9,470.00	80.10	180.00	9,391.15	-158.14	0.00	158.14	30.00	30.00	0.00
9,480.00	83.10	180.00	9,392.62	-168.03	0.00	168.03	30.00	30.00	0.00
9,490.00	86.10	180.00	9,393.56	-177.98	0.00	177.98	30.00	30.00	0.00
9,500.00	89.10	180.00	9,393.98	-187.97	0.00	187.97	30.00	30.00	0.00
9,503.01	90.00	180.00	9,394.00	-190.99	0.00	190.99	30.00	30.00	0.00
EOC - Hold 90.0° Inc. :: 180.0° Azi.									
9,600.00	90.00	180.00	9,394.00	-287.97	0.00	287.97	0.00	0.00	0.00
9,700.00	90.00	180.00	9,394.00	-387.97	0.00	387.97	0.00	0.00	0.00
9,800.00	90.00	180.00	9,394.00	-487.97	0.00	487.97	0.00	0.00	0.00
9,900.00	90.00	180.00	9,394.00	-587.97	0.00	587.97	0.00	0.00	0.00
10,000.00	90.00	180.00	9,394.00	-687.97	0.00	687.97	0.00	0.00	0.00
10,100.00	90.00	180.00	9,394.00	-787.97	0.00	787.97	0.00	0.00	0.00
10,200.00	90.00	180.00	9,394.00	-887.97	0.00	887.97	0.00	0.00	0.00
10,300.00	90.00	180.00	9,394.00	-987.97	0.00	987.97	0.00	0.00	0.00
10,400.00	90.00	180.00	9,394.00	-1,087.97	0.00	1,087.97	0.00	0.00	0.00
10,500.00	90.00	180.00	9,394.00	-1,187.97	0.00	1,187.97	0.00	0.00	0.00
10,600.00	90.00	180.00	9,394.00	-1,287.97	0.00	1,287.97	0.00	0.00	0.00
10,700.00	90.00	180.00	9,394.00	-1,387.97	0.00	1,387.97	0.00	0.00	0.00
10,800.00	90.00	180.00	9,394.00	-1,487.97	0.00	1,487.97	0.00	0.00	0.00
10,900.00	90.00	180.00	9,394.00	-1,587.97	0.00	1,587.97	0.00	0.00	0.00
11,000.00	90.00	180.00	9,394.00	-1,687.97	0.00	1,687.97	0.00	0.00	0.00
11,100.00	90.00	180.00	9,394.00	-1,787.97	0.00	1,787.97	0.00	0.00	0.00
11,191.92	90.00	180.00	9,394.00	-1,879.89	0.00	1,879.89	0.00	0.00	0.00

PBHL #1[S13Fee3H]



Black Viper Energy
Survey Report



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Site:	Sherman '13' Fee #3H	MD Reference:	WELL @ 3776.00ft (Original Well Elev)
Well:	Sherman '13' Fee #3H	North Reference:	Grid
Wellbore:	Lateral #1	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	EDM 2003.14.1.0 Server DB

Targets

Target Name

- hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- Shape									
PBHL #1[S13Fee3H]	0.00	0.00	9,394.00	-1,879.89	0.00	736,217.61	905,121.21	33° 1' 5.568 N	103° 8' 47.509 W
- plan hits target									
- Point									

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
	8,190.00	Abo Dolomite		0.00	0.00
9,363.10	9,345.00	Wolfcamp		0.00	0.00
	9,619.00	Wolfcamp 'B'		0.00	0.00

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
9,203.01	9,203.01	0.00	0.00	KOP - Build 30.0° / 100
9,503.01	9,394.00	-190.99	0.00	EOC - Hold 90.0° Inc. :: 180.0° Azi.

Checked By: _____ Approved By: _____ Date: _____