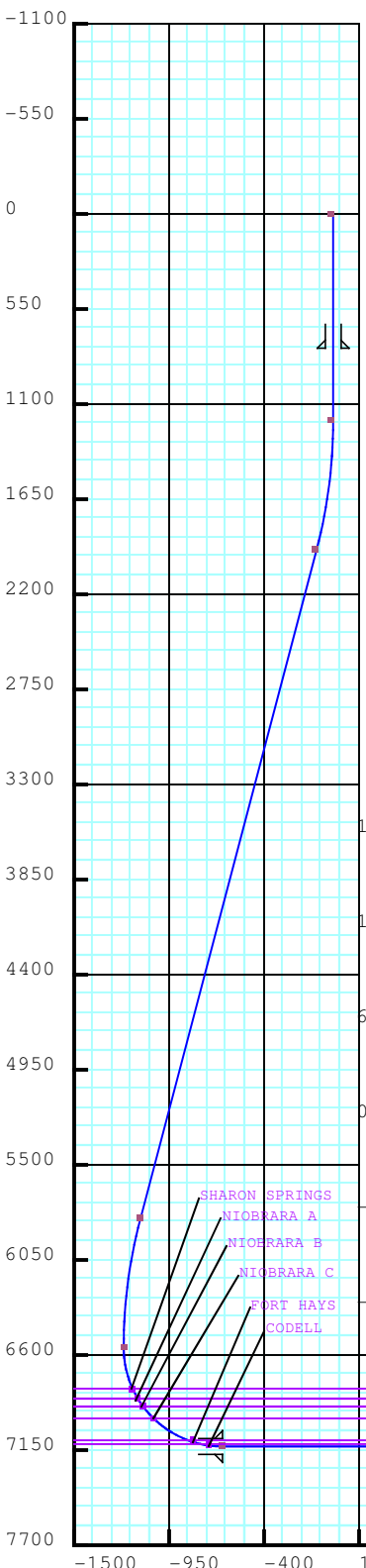


**5D Plan Report**

Anadarko Petroleum

Field Name: *WATTENBERG_ANADARKO_NAD 83*
Site Name: *ELLIOTT STATE 5-17HZ PAD*
Well Name: *ELLIOTT STATE 41C-17HZ*
Plan: *WP01 PERMIT*





Plan Data for ELLIOTT STATE 41C-17HZ

Field: WATTENBERG_ANADARKO_NAD 83

Map Unit: USFT Vertical Reference Datum (VRD): Mean Sea Level

Projected Coordinate System: NAD83 / Colorado North (ftUS)

Slot: ELLIOTT STATE 41C-17HZ

Position:
Offset is from Site centre

+N/-S: -0.37USft Northing: 1326761.61USft Latitude: 40.228906°

+E/-W: 60.03USft Easting: 3161872.73USft Longitude: -104.920250°

Elevation Above VRD: 4812.00USft

Plan Point Information:

DogLeg Severity Unit: °/100.00ft Position offsets from Slot centre

MD	Inc	Az	TVD	+N/-S	+E/-W	VSec	DLS	Toolface
(USft)	(°)	(°)	(USft)	(USft)	(USft)	(USft)	(DLSU)	(°)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0R
1200.00	0.00	0.00	1200.00	0.00	0.00	0.00	0.00	0.0R
1950.36	15.01	280.78	1941.81	18.28	-95.98	-96.10	2.00	79.2L
5959.52	15.01	280.78	5814.23	212.48	-1115.80	-1117.18	0.00	0.0R
6709.88	0.00	0.00	6556.04	230.76	-1211.78	-1213.28	2.00	180.0R
7609.88	90.00	90.38	7129.00	226.92	-638.84	-640.33	10.00	90.4R
12546.16	90.00	90.38	7129.00	193.82	4297.33	4295.95	0.00	0.0R

Plan Data for ELLIOTT STATE 41C-17HZ

Casing Point Information:

Name	MD	TVD
	(USft)	(USft)
9 5/8 in	776.00	776.00
7 in	7609.88	7129.00

Plan Data for ELLIOTT STATE 41C-17HZ

Target Set Information:

Name: 21

Name	TVD	Lat	Long	Shape
	(USft)	(°)	(°)	
HEEL	7129.00	40.229529	-104.922538	Cuboid
PBHL	7129.00	40.229437	-104.904859	Cuboid

Plan Data for ELLIOTT STATE 41C-17HZ

Formation Point Information:

Name	TVD	Elevation	MD
	(USft)	(USft)	(USft)
FOX HILLS BASE	726.00	4103.00	726.00
PARKMAN	3521.00	1308.00	3585.31
SUSSEX	3984.00	845.00	4064.66
SHARON SPRINGS	6798.00	-1969.00	6959.68
NIOBRARA A	6857.00	-2028.00	7026.75
NIOBRARA B	6904.00	-2075.00	7083.83
NIOBRARA C	6974.00	-2145.00	7178.31
FORT HAYS	7104.00	-2275.00	7440.01
CODELL	7124.00	-2295.00	7534.13

KOP- 6709.88' MD

LINER TOP- 6609.88' MD

True Grid Mag

Grid Convergence: 0.37°

Mag Declination: 8.67°

Bearing:

True = Mag + 8.67°

Grid = True - 0.37°

WP01 PERMIT 8/22/13

BY: JA UNDERWOOD



Weatherford®



Plan Surveys for the ELLIOTT STATE 41C-17HZ

Site Name ELLIOTT STATE 5-17HZ PAD	Units : US ft	North Reference : True	Convergence Angle : 0.37
	Position	Northing : 1326761.59 US ft	Latitude : 40.228907
		Easting : 3161812.70 US ft	Longitude : -104.920465
	Elevation above: 4812.00 US ft Comment :		
Slot Name ELLIOTT STATE 41C-17HZ	Position (Offsets relative to Site Centre)		
	+N / -S : -0.37 US ft	Northing : 1326761.61 US ft	Latitude : 40.228906
	+E / -W : 60.03 US ft	Easting : 3161872.73 US ft	Longitude : -104.920250
	Slot TVD Reference : Ground Elevation Elevation above : 4812.00 US ft Comment :		
Well Name ELLIOTT STATE 41C-17HZ	Type : Main well	UWI :	Plan : WP01 PERMIT
	Rig Height Drill Floor : 17.00 US ft	Comment :	
	Relative to : 4829.00 US ft		
	Closure Distance : 4301.7 US ft	Closure Azimuth : 87.4175°	
	Vertical Section (Position of Origin Relative to Slot)		
	+N / -S : 0.00 US ft	+E / -W : 0.00 US ft	Az : 90.38°
	Magnetic Parameters		
	Model : BGGM	Field Strength : 52684.0nT	Dec : 8.67°
			Dip : 66.64°
			Date : 22/May/2013

Target Set**Name :** 21**Number of Targets :** 2**Comment :**

TargetName:	Position (Relative to centre)			
HEEL	+N / -S : 226.96US ft	Northing : 1326984.39 US ft	Latitude : 40°13'46.304400"	
Shape:	+E / -W : -638.84 US ft	Easting : 3161232.42US ft	Longitude : -104°55'21.136800"	
Cuboid	TVD (Drill Floor) : 7129.00 US ft			
	Orientation	Azimuth : 0.00°	Inclination : 0.00°	
	Dimensions	Length : 1.00 US ft	Breadth : 1.00 US ft	Height : 1.00 US ft

TargetName:	Position (Relative to centre)			
PBHL	+N / -S : 193.82US ft	Northing : 1326983.51 US ft	Latitude : 40°13'45.973200"	
Shape:	+E / -W : 4297.33 US ft	Easting : 3166168.71US ft	Longitude : -104°54'17.492400"	
Cuboid	TVD (Drill Floor) : 7129.00 US ft			
	Orientation	Azimuth : 0.00°	Inclination : 0.00°	
	Dimensions	Length : 1.00 US ft	Breadth : 1.00 US ft	Height : 1.00 US ft

Casing Points (Relative to centre, TVD relative to Drill Floor)								
Name	MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N.Offset (US ft)	E.Offset (US ft)	Latitude (°)	Longitude (°)
9 5/8 in	776.00	0.00	0.00	776.00	0.00	0.00	40.228906	-104.920250
7 in	7609.88	90.00	90.38	7129.00	226.92	-638.84	40.229529	-104.922538

Well path created using minimum curvature

Salient Points (Relative to centre, TVD relative to Drill Floor)											
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N.Offset (US ft)	E.Offset (US ft)	Northing (US ft)	Easting (US ft)	DLS (°/100 US ft)	T.Face (°)	VS (US ft)	Comment
0.00	0.00	0.00	0.00	0.00	0.00	1326761.61	3161872.73	0.00	0.00	-0.00	SURFACE
776.00	0.00	0.00	776.00	0.00	0.00	1326761.61	3161872.73	0.00	0.00	-0.00	9 5/8 in
1200.00	0.00	0.00	1200.00	0.00	0.00	1326761.61	3161872.73	0.00	0.00	-0.00	BEGIN NUDGE
1950.36	15.01	280.78	1941.81	18.28	-95.98	1326779.26	3161776.63	2.00	280.78	-96.10	
5959.52	15.01	280.78	5814.23	212.48	-1115.80	1326966.79	3160755.57	0.00	0.00	-1117.18	

5D Plan Report

Salient Points (Relative to centre, TVD relative to Drill Floor)											
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N.Offset (US ft)	E.Offset (US ft)	Northing (US ft)	Easting (US ft)	DLS (°/100 US ft)	T.Face (°)	VS (US ft)	Comment
6709.88	0.00	0.00	6556.04	230.76	-1211.78	1326984.45	3160659.47	2.00	180.00	-1213.28	KOP
7609.88	90.00	90.38	7129.00	226.92	-638.84	1326984.35	3161232.43	10.00	90.38	-640.33	7 in
12546.16	90.00	90.38	7129.00	193.82	4297.33	1326983.51	3166168.71	0.00	0.00	4295.95	TD

Interpolated Points (Relative to centre, TVD relative to Drill Floor)											
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N.Offset (US ft)	E.Offset (US ft)	DLS (°/100 US ft)	T.Face (°)	VS (US ft)	Comment		
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.00	SURFACE		
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	-0.00			
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	-0.00			
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	-0.00			
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	-0.00			
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	-0.00			
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	-0.00			
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	-0.00			
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	-0.00			
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	-0.00			
1000.00	0.00	0.00	1000.00	0.00	0.00	0.00	0.00	-0.00			
1100.00	0.00	0.00	1100.00	0.00	0.00	0.00	0.00	-0.00			
1200.00	0.00	0.00	1200.00	0.00	0.00	0.00	0.00	-0.00	BEGIN NUDGE		
1300.00	2.00	280.78	1299.98	0.33	-1.71	2.00	280.78	-1.72			
1400.00	4.00	280.78	1399.84	1.31	-6.86	2.00	0.00	-6.86			
1500.00	6.00	280.78	1499.45	2.94	-15.42	2.00	0.00	-15.44			
1600.00	8.00	280.78	1598.70	5.22	-27.39	2.00	0.00	-27.42			
1700.00	10.00	280.78	1697.47	8.14	-42.75	2.00	0.00	-42.81			
1800.00	12.00	280.78	1795.62	11.71	-61.50	2.00	0.00	-61.57			
1900.00	14.00	280.78	1893.06	15.92	-83.59	2.00	0.00	-83.70			
1950.36	15.01	280.78	1941.81	18.28	-95.98	2.00	0.00	-96.10			
2000.00	15.01	280.78	1989.76	20.68	-108.61	0.00	0.00	-108.75			
2100.00	15.01	280.78	2086.35	25.53	-134.05	0.00	0.00	-134.21			
2200.00	15.01	280.78	2182.94	30.37	-159.48	0.00	0.00	-159.68			
2300.00	15.01	280.78	2279.52	35.21	-184.92	0.00	0.00	-185.15			
2400.00	15.01	280.78	2376.11	40.06	-210.36	0.00	0.00	-210.62			
2500.00	15.01	280.78	2472.70	44.90	-235.80	0.00	0.00	-236.09			
2600.00	15.01	280.78	2569.29	49.75	-261.23	0.00	0.00	-261.56			
2700.00	15.01	280.78	2665.88	54.59	-286.67	0.00	0.00	-287.03			
2800.00	15.01	280.78	2762.47	59.43	-312.11	0.00	0.00	-312.49			
2900.00	15.01	280.78	2859.06	64.28	-337.54	0.00	0.00	-337.96			
3000.00	15.01	280.78	2955.65	69.12	-362.98	0.00	0.00	-363.43			
3100.00	15.01	280.78	3052.24	73.97	-388.42	0.00	0.00	-388.90			
3200.00	15.01	280.78	3148.83	78.81	-413.86	0.00	0.00	-414.37			
3300.00	15.01	280.78	3245.42	83.65	-439.29	0.00	0.00	-439.84			

5D Plan Report

Interpolated Points (Relative to centre, TVD relative to Drill Floor)									
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N.Offset (US ft)	E.Offset (US ft)	DLS (°/100 US ft)	T.Face (°)	VS (US ft)	Comment
3400.00	15.01	280.78	3342.01	88.50	-464.73	0.00	0.00	-465.31	
3500.00	15.01	280.78	3438.60	93.34	-490.17	0.00	0.00	-490.77	
3600.00	15.01	280.78	3535.19	98.19	-515.60	0.00	0.00	-516.24	
3700.00	15.01	280.78	3631.77	103.03	-541.04	0.00	0.00	-541.71	
3800.00	15.01	280.78	3728.36	107.87	-566.48	0.00	0.00	-567.18	
3900.00	15.01	280.78	3824.95	112.72	-591.91	0.00	0.00	-592.65	
4000.00	15.01	280.78	3921.54	117.56	-617.35	0.00	0.00	-618.12	
4100.00	15.01	280.78	4018.13	122.41	-642.79	0.00	0.00	-643.59	
4200.00	15.01	280.78	4114.72	127.25	-668.23	0.00	0.00	-669.06	
4300.00	15.01	280.78	4211.31	132.09	-693.66	0.00	0.00	-694.52	
4400.00	15.01	280.78	4307.90	136.94	-719.10	0.00	0.00	-719.99	
4500.00	15.01	280.78	4404.49	141.78	-744.54	0.00	0.00	-745.46	
4600.00	15.01	280.78	4501.08	146.63	-769.97	0.00	0.00	-770.93	
4700.00	15.01	280.78	4597.67	151.47	-795.41	0.00	0.00	-796.40	
4800.00	15.01	280.78	4694.26	156.31	-820.85	0.00	0.00	-821.87	
4900.00	15.01	280.78	4790.85	161.16	-846.29	0.00	0.00	-847.34	
5000.00	15.01	280.78	4887.44	166.00	-871.72	0.00	0.00	-872.80	
5100.00	15.01	280.78	4984.02	170.85	-897.16	0.00	0.00	-898.27	
5200.00	15.01	280.78	5080.61	175.69	-922.60	0.00	0.00	-923.74	
5300.00	15.01	280.78	5177.20	180.53	-948.03	0.00	0.00	-949.21	
5400.00	15.01	280.78	5273.79	185.38	-973.47	0.00	0.00	-974.68	
5500.00	15.01	280.78	5370.38	190.22	-998.91	0.00	0.00	-1000.15	
5600.00	15.01	280.78	5466.97	195.07	-1024.34	0.00	0.00	-1025.62	
5700.00	15.01	280.78	5563.56	199.91	-1049.78	0.00	0.00	-1051.08	
5800.00	15.01	280.78	5660.15	204.75	-1075.22	0.00	0.00	-1076.55	
5900.00	15.01	280.78	5756.74	209.60	-1100.66	0.00	0.00	-1102.02	
5959.52	15.01	280.78	5814.23	212.48	-1115.80	0.00	0.00	-1117.18	
6000.00	14.20	280.78	5853.40	214.39	-1125.82	2.00	180.00	-1127.22	
6100.00	12.20	280.78	5950.76	218.66	-1148.25	2.00	180.00	-1149.67	
6200.00	10.20	280.78	6048.85	222.29	-1167.32	2.00	180.00	-1168.77	
6300.00	8.20	280.78	6147.56	225.28	-1183.02	2.00	180.00	-1184.49	
6400.00	6.20	280.78	6246.76	227.63	-1195.33	2.00	180.00	-1196.82	
6500.00	4.20	280.78	6346.35	229.32	-1204.23	2.00	180.00	-1205.73	
6600.00	2.20	280.78	6446.19	230.37	-1209.71	2.00	180.00	-1211.21	
6700.00	0.20	280.78	6546.16	230.76	-1211.76	2.00	180.00	-1213.27	
6709.88	0.00	0.00	6556.04	230.76	-1211.78	2.00	180.00	-1213.28	KOP
6800.00	9.01	90.38	6645.79	230.71	-1204.71	10.00	90.38	-1206.21	
6900.00	19.01	90.38	6742.69	230.55	-1180.53	10.00	0.00	-1182.03	
7000.00	29.01	90.38	6833.92	230.28	-1139.89	10.00	0.00	-1141.39	
7100.00	39.01	90.38	6916.71	229.90	-1084.02	10.00	0.00	-1085.52	
7200.00	49.01	90.38	6988.53	229.44	-1014.63	10.00	0.00	-1016.13	

5D Plan Report

Interpolated Points (Relative to centre, TVD relative to Drill Floor)									
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N.Offset (US ft)	E.Offset (US ft)	DLS (°/100 US ft)	T.Face (°)	VS (US ft)	Comment
7300.00	59.01	90.38	7047.22	228.90	-933.82	10.00	0.00	-935.32	
7400.00	69.01	90.38	7090.99	228.29	-844.05	10.00	0.00	-845.55	
7500.00	79.01	90.38	7118.49	227.65	-748.04	10.00	0.00	-749.54	
7600.00	89.01	90.38	7128.91	226.98	-648.72	10.00	0.00	-650.21	
7609.88	90.00	90.38	7129.00	226.92	-638.84	10.00	359.99	-640.33	
7700.00	90.00	90.38	7129.00	226.31	-548.72	0.00	0.00	-550.21	
7800.00	90.00	90.38	7129.00	225.64	-448.72	0.00	0.00	-450.21	
7900.00	90.00	90.38	7129.00	224.97	-348.72	0.00	0.00	-350.21	
8000.00	90.00	90.38	7129.00	224.30	-248.73	0.00	0.00	-250.21	
8100.00	90.00	90.38	7129.00	223.63	-148.73	0.00	0.00	-150.21	
8200.00	90.00	90.38	7129.00	222.96	-48.73	0.00	0.00	-50.21	
8300.00	90.00	90.38	7129.00	222.29	51.27	0.00	0.00	49.79	
8400.00	90.00	90.38	7129.00	221.62	151.26	0.00	0.00	149.79	
8500.00	90.00	90.38	7129.00	220.95	251.26	0.00	0.00	249.79	
8600.00	90.00	90.38	7129.00	220.28	351.26	0.00	0.00	349.79	
8700.00	90.00	90.38	7129.00	219.61	451.26	0.00	0.00	449.79	
8800.00	90.00	90.38	7129.00	218.94	551.26	0.00	0.00	549.79	
8900.00	90.00	90.38	7129.00	218.27	651.25	0.00	0.00	649.79	
9000.00	90.00	90.38	7129.00	217.60	751.25	0.00	0.00	749.79	
9100.00	90.00	90.38	7129.00	216.93	851.25	0.00	0.00	849.79	
9200.00	90.00	90.38	7129.00	216.26	951.25	0.00	0.00	949.79	
9300.00	90.00	90.38	7129.00	215.59	1051.24	0.00	0.00	1049.79	
9400.00	90.00	90.38	7129.00	214.92	1151.24	0.00	0.00	1149.79	
9500.00	90.00	90.38	7129.00	214.25	1251.24	0.00	0.00	1249.79	
9600.00	90.00	90.38	7129.00	213.58	1351.24	0.00	0.00	1349.79	
9700.00	90.00	90.38	7129.00	212.91	1451.23	0.00	0.00	1449.79	
9800.00	90.00	90.38	7129.00	212.23	1551.23	0.00	0.00	1549.79	
9900.00	90.00	90.38	7129.00	211.56	1651.23	0.00	0.00	1649.79	
10000.00	90.00	90.38	7129.00	210.89	1751.23	0.00	0.00	1749.79	
10100.00	90.00	90.38	7129.00	210.22	1851.23	0.00	0.00	1849.79	
10200.00	90.00	90.38	7129.00	209.55	1951.22	0.00	0.00	1949.79	
10300.00	90.00	90.38	7129.00	208.88	2051.22	0.00	0.00	2049.79	
10400.00	90.00	90.38	7129.00	208.21	2151.22	0.00	0.00	2149.79	
10500.00	90.00	90.38	7129.00	207.54	2251.22	0.00	0.00	2249.79	
10600.00	90.00	90.38	7129.00	206.87	2351.21	0.00	0.00	2349.79	
10700.00	90.00	90.38	7129.00	206.20	2451.21	0.00	0.00	2449.79	
10800.00	90.00	90.38	7129.00	205.53	2551.21	0.00	0.00	2549.79	
10900.00	90.00	90.38	7129.00	204.86	2651.21	0.00	0.00	2649.79	
11000.00	90.00	90.38	7129.00	204.19	2751.21	0.00	0.00	2749.79	
11100.00	90.00	90.38	7129.00	203.52	2851.20	0.00	0.00	2849.79	
11200.00	90.00	90.38	7129.00	202.85	2951.20	0.00	0.00	2949.79	

5D Plan Report

Interpolated Points (Relative to centre, TVD relative to Drill Floor)									
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N.Offset (US ft)	E.Offset (US ft)	DLS (°/100 US ft)	T.Face (°)	VS (US ft)	Comment
11300.00	90.00	90.38	7129.00	202.18	3051.20	0.00	0.00	3049.79	
11400.00	90.00	90.38	7129.00	201.51	3151.20	0.00	0.00	3149.79	
11500.00	90.00	90.38	7129.00	200.84	3251.19	0.00	0.00	3249.79	
11600.00	90.00	90.38	7129.00	200.17	3351.19	0.00	0.00	3349.79	
11700.00	90.00	90.38	7129.00	199.50	3451.19	0.00	0.00	3449.79	
11800.00	90.00	90.38	7129.00	198.83	3551.19	0.00	0.00	3549.79	
11900.00	90.00	90.38	7129.00	198.15	3651.19	0.00	0.00	3649.79	
12000.00	90.00	90.38	7129.00	197.48	3751.18	0.00	0.00	3749.79	
12100.00	90.00	90.38	7129.00	196.81	3851.18	0.00	0.00	3849.79	
12200.00	90.00	90.38	7129.00	196.14	3951.18	0.00	0.00	3949.79	
12300.00	90.00	90.38	7129.00	195.47	4051.18	0.00	0.00	4049.79	
12400.00	90.00	90.38	7129.00	194.80	4151.17	0.00	0.00	4149.79	
12500.00	90.00	90.38	7129.00	194.13	4251.17	0.00	0.00	4249.79	
12546.16	90.00	90.38	7129.00	193.82	4297.33	0.00	0.00	4295.95	TD

Formation Points (Relative to centre, TVD relative to Drill Floor)			
Name	MD (US ft)	TVD (US ft)	
FOX HILLS BASE	726.00	726.00	
PARKMAN	3585.31	3521.00	
SUSSEX	4064.66	3984.00	
SHARON SPRINGS	6959.68	6798.00	
NIOBRARA A	7026.75	6857.00	
NIOBRARA B	7083.83	6904.00	
NIOBRARA C	7178.31	6974.00	
FORT HAYS	7440.01	7104.00	
CODELL	7534.13	7124.00	