

KERR-MCGEE OIL & GAS ONSHORE LP (LAMBERT STATE PLANE COORD)

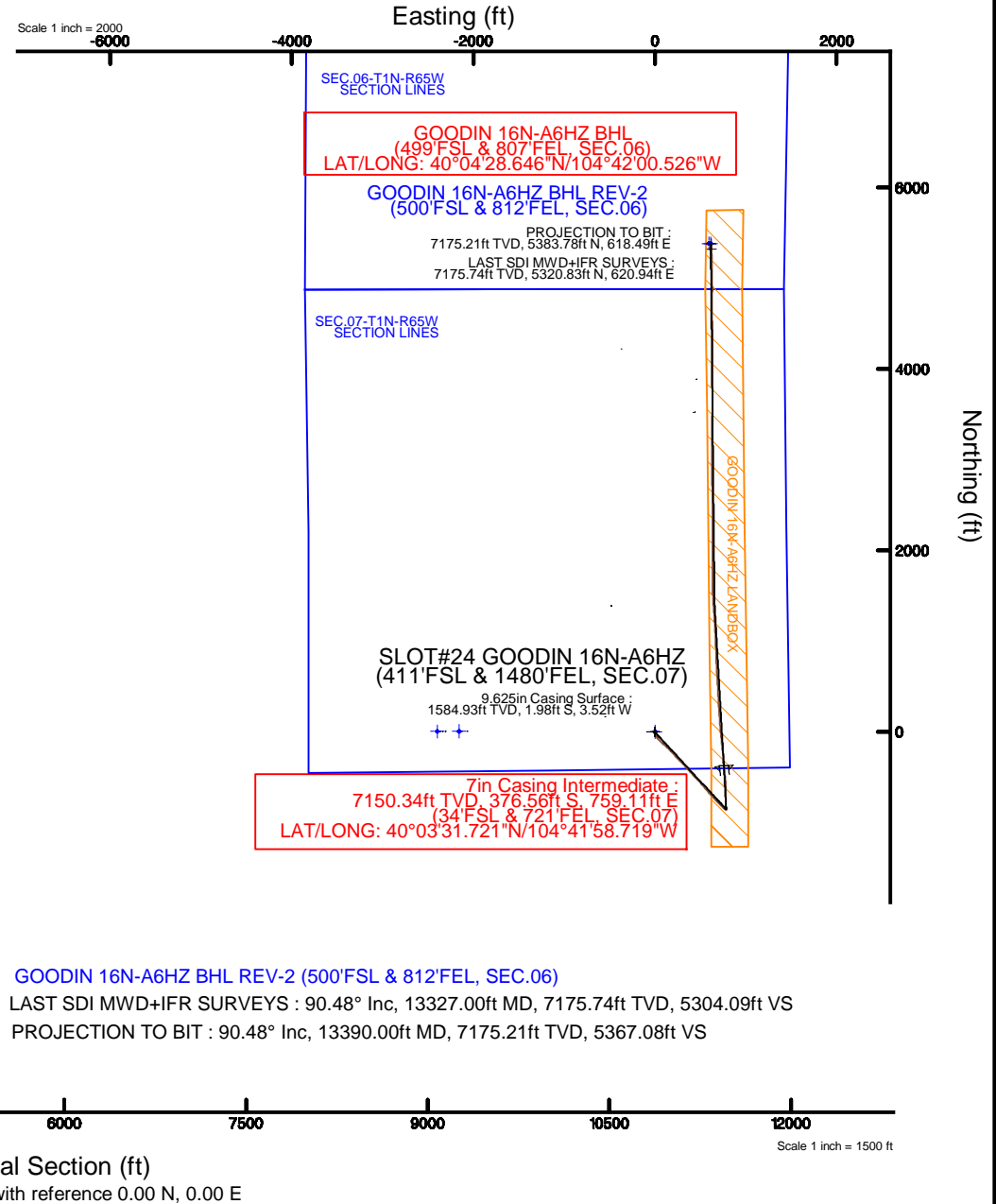
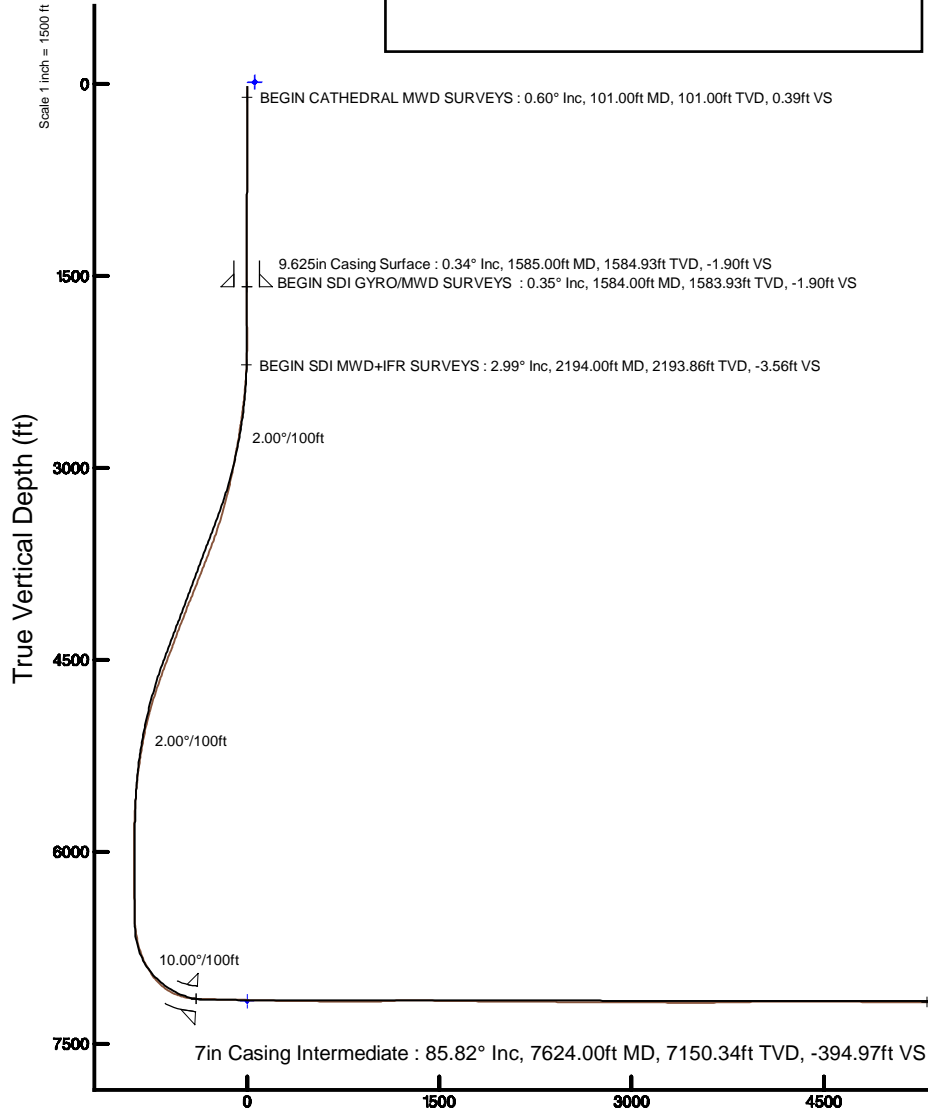
Location: COLORADO Slot: SLOT#24 GOODIN 16N-A6HZ (411'FSL & 1480'FEL, SEC.07)
 Field: WELD COUNTY (KERR MCGEE) Well: GOODIN 16N-A6HZ
 Facility: SEC.07-T1N-R65W Wellbore: GOODIN 16N-A6HZ PWB



SURVEYS FROM 1584 FT. TO 13327 FT. WERE
 ACQUIRED BY SCIENTIFIC DRILLING
 INTERNATIONAL MWD.

Plot reference wellpath is GOODIN 16N-A6HZ (REV-C.0) PWP

True vertical depths are referenced to H&P 307 (25KB) (RKB)	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
Measured depths are referenced to H&P 307 (25KB) (RKB)	North Reference: True north
H&P 307 (25KB) (RKB) to Mean Sea Level: 5004 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#24 GOODIN 16N-A6HZ (411'FSL & 1480'FEL, SEC.07)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: amarcar on 25/Jun/2015



ANADARKO E&P ONSHORE LLC

SURVEY REPORT

GOODIN 16N-A6HZ

H&P 307

3/4/2015



The **Ultimate Partner** In Wellbore Placement

CUSTOMER ANADARKO E&P ONSHORE LLC
PROJECT GOODIN 16N-A6HZ
FIELD WATTENBERG

SDI JOB NO. 260901
SDI DISTRICT Casper
SDI KIT/UNIT C11-EM#70 / 77-MP-42

SITE INFORMATION

Site Name GOODIN PAD
Lat/Long
Northing
Easting

Section 7
Township 1 N
Range 65 W

MAP INFORMATION

North Reference True North
Grid Correction
System US State Plane 1983
Datum North American Datum 1983 (GRS 1980)
Map Zone LAMBERT COLORADO SP NORTHERN ZONE
(501) FEET



WELL INFORMATION

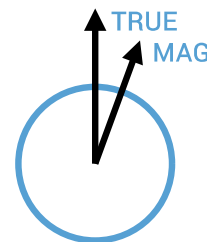
Lat/Long 40° 3' 35.442" N, 104° 42' 8.482" W
Northing 1,265,651.02 ft
Easting 3,223,263.69 ft
UWI 05-123-40744

DEPTH AND ELEVATION REFERENCE

Ground Level 5004 ft above Mean Sea Level
Reference Datum RKB
Reference Height 25 ft above G.L.
Reference Elevation 5029 ft

VERTICAL SECTION REFERENCE

+N/-S 0 ft
+E/-W 0 ft
Proposal Direction 358.60°
Calculation Method Minimum Curvature



GEOMAGNETIC REFERENCE INFORMATION

Local Gravity: 999.032 mG [computed]

MD	MODEL	DATE	DECLINATION	MAG TO TRUE
0-1555 ft	MAG VAR-IFR	02 Mar 2015	8.13°	add 8.13°
1555-2114 ft	MAG VAR-IFR	03 Mar 2015	8.14°	add 8.14°
2114-5589 ft	MAG VAR-IFR	03 Mar 2015	8.13°	add 8.13°
5589-8603 ft	MAG VAR-IFR	03 Mar 2015	8.07°	add 8.07°
8603-13327 ft	MAG VAR-IFR	03 Mar 2015	8.05°	add 8.05°

WELL NOTES

SURVEYS FROM 0 FT. TO 1553 FT. WERE ACQUIRED BY CATHEDRAL MWD.

SURVEYS FROM 1584 FT. TO 13327 FT. WERE ACQUIRED BY SCIENTIFIC DRILLING INTERNATIONAL MWD.

OPERATORS

C. COLLINS, S. WAXLER

SDI Operator Name (Printed)

SIGNATURE

DATE

MD ft	INC deg	AZIM deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft
0.00	0.00	7.40	0.00	0.00	0.00	0.00	Invalid
25.00	0.00	7.40	25.00	0.00	0.00	0.00	0.00
101.00	0.60	7.40	101.00	0.39	0.39	0.05	0.79
181.00	0.50	359.90	180.99	1.16	1.16	0.10	0.15
259.00	0.70	12.20	258.99	1.96	1.97	0.20	0.30
339.00	0.80	5.30	338.98	2.99	3.00	0.36	0.17
419.00	0.30	10.40	418.98	3.75	3.76	0.45	0.63
499.00	0.40	150.20	498.98	3.71	3.72	0.63	0.82
579.00	0.70	168.70	578.98	2.98	3.00	0.86	0.43
659.00	0.80	161.90	658.97	1.96	1.99	1.13	0.17
739.00	0.70	174.90	738.96	0.94	0.98	1.35	0.25
819.00	0.80	175.90	818.95	-0.10	-0.07	1.43	0.13
899.00	0.20	192.70	898.95	-0.80	-0.76	1.44	0.76
979.00	0.30	222.30	978.95	-1.08	-1.05	1.27	0.20
1059.00	0.40	234.00	1058.95	-1.39	-1.37	0.90	0.15
1139.00	0.40	258.50	1138.95	-1.60	-1.59	0.40	0.21
1219.00	0.50	262.50	1218.94	-1.69	-1.69	-0.22	0.13
1299.00	0.50	265.10	1298.94	-1.75	-1.77	-0.91	0.03
1379.00	0.60	265.30	1378.94	-1.79	-1.83	-1.68	0.13
1459.00	0.60	259.30	1458.93	-1.88	-1.94	-2.51	0.08
1553.00	0.40	278.30	1552.93	-1.91	-1.99	-3.32	0.27
1584.00	0.35	264.64	1583.93	-1.90	-1.98	-3.52	0.33
1646.00	0.35	359.38	1645.93	-1.72	-1.81	-3.71	0.84
1739.00	0.26	342.33	1738.93	-1.23	-1.32	-3.78	0.14
1832.00	0.35	348.40	1831.93	-0.74	-0.84	-3.90	0.10
1924.00	0.18	0.18	1923.93	-0.32	-0.42	-3.96	0.20
2019.00	0.18	25.49	2018.92	-0.04	-0.14	-3.89	0.08
2114.00	1.23	158.47	2113.92	-0.87	-0.96	-3.45	1.43
2194.00	2.99	152.75	2193.86	-3.56	-3.61	-2.19	2.21
2289.00	3.85	163.25	2288.69	-8.86	-8.86	-0.13	1.12
2384.00	4.74	172.41	2383.43	-15.84	-15.81	1.31	1.18
2478.00	6.76	165.95	2476.95	-25.09	-25.02	3.16	2.25
2573.00	7.94	161.31	2571.17	-36.81	-36.66	6.62	1.39

MD ft	INC deg	AZIM deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft
2668.00	10.28	149.01	2664.97	-50.44	-50.14	13.09	3.19
2763.00	11.02	140.76	2758.34	-64.98	-64.43	23.19	1.78
2857.00	12.41	143.64	2850.38	-80.36	-79.53	34.86	1.61
2952.00	14.73	135.77	2942.73	-97.58	-96.41	49.34	3.11
3046.00	16.40	130.64	3033.29	-115.24	-113.61	67.75	2.30
3140.00	18.73	130.20	3122.90	-134.14	-132.00	89.35	2.48
3235.00	20.13	132.96	3212.49	-155.70	-152.98	112.96	1.76
3329.00	20.37	131.38	3300.68	-178.11	-174.82	137.07	0.64
3423.00	22.25	137.37	3388.26	-202.61	-198.73	161.40	3.06
3518.00	23.49	138.12	3475.79	-230.54	-226.06	186.22	1.34
3612.00	26.03	136.08	3561.15	-260.00	-254.87	213.04	2.85
3706.00	27.04	137.28	3645.25	-291.24	-285.42	241.84	1.22
3801.00	27.60	136.09	3729.65	-323.68	-317.14	271.75	0.82
3895.00	28.02	136.52	3812.79	-356.12	-348.84	302.05	0.50
3989.00	26.85	138.05	3896.22	-388.64	-380.65	331.43	1.46
4083.00	27.63	138.88	3979.80	-421.53	-412.86	359.95	0.93
4177.00	28.22	138.65	4062.85	-455.34	-445.97	388.97	0.64
4271.00	26.99	136.32	4146.15	-488.16	-478.08	418.39	1.74
4365.00	28.23	136.54	4229.44	-520.45	-509.65	448.42	1.33
4460.00	26.09	136.36	4313.96	-552.60	-541.08	478.29	2.26
4554.00	26.30	138.64	4398.31	-583.87	-571.67	506.32	1.10
4648.00	25.42	140.36	4482.90	-615.68	-602.84	532.95	1.23
4742.00	26.34	138.24	4567.47	-647.42	-633.94	559.71	1.38
4836.00	25.27	136.96	4652.10	-678.31	-664.16	587.29	1.29
4930.00	23.78	137.81	4737.61	-707.65	-692.86	613.71	1.62
5024.00	22.34	138.38	4824.10	-735.65	-720.27	638.31	1.55
5119.00	19.38	137.30	4912.86	-761.28	-745.36	660.99	3.14
5213.00	17.08	137.07	5002.14	-783.33	-766.93	680.98	2.45
5307.00	15.12	137.71	5092.45	-802.94	-786.10	698.63	2.09
5402.00	13.11	134.00	5184.58	-819.98	-802.76	714.72	2.32
5496.00	12.27	132.68	5276.28	-834.52	-816.93	729.73	0.95
5590.00	11.44	132.35	5368.27	-847.91	-829.98	743.96	0.88
5684.00	8.73	130.83	5460.81	-859.16	-840.93	756.25	2.89

MD ft	INC deg	AZIM deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft
5778.00	6.24	130.14	5554.00	-867.34	-848.89	765.56	2.66
5872.00	5.31	125.18	5647.53	-873.32	-854.69	773.02	1.12
5966.00	3.68	130.81	5741.23	-877.94	-859.17	778.85	1.80
6061.00	2.17	131.30	5836.11	-881.21	-862.35	782.51	1.58
6155.00	1.39	104.86	5930.06	-882.74	-863.82	784.95	1.19
6249.00	0.95	56.71	6024.05	-882.64	-863.68	786.71	1.10
6343.00	1.21	36.31	6118.03	-881.44	-862.45	787.95	0.49
6437.00	0.33	315.29	6212.02	-880.46	-861.45	788.35	1.28
6531.00	0.53	15.74	6306.02	-879.85	-860.84	788.28	0.50
6677.00	0.68	328.78	6452.01	-878.45	-859.46	788.01	0.34
6721.00	0.50	333.89	6496.01	-878.05	-859.06	787.79	0.42
6784.00	4.20	341.46	6558.95	-875.60	-856.63	786.94	5.88
6815.00	6.40	344.49	6589.81	-872.84	-853.89	786.12	7.14
6909.00	11.77	355.22	6682.60	-858.18	-839.27	783.92	5.97
7004.00	17.65	354.01	6774.45	-834.12	-815.27	781.60	6.20
7098.00	25.67	356.53	6861.74	-799.51	-780.71	778.88	8.58
7192.00	32.95	359.81	6943.66	-753.54	-734.76	777.56	7.93
7242.00	37.39	2.63	6984.52	-724.79	-705.99	778.21	9.45
7286.00	43.92	1.79	7017.89	-696.20	-677.36	779.30	14.89
7336.00	49.85	0.22	7052.05	-659.75	-640.88	779.92	12.08
7380.00	55.42	358.82	7078.74	-624.80	-605.93	779.61	12.92
7475.00	71.68	353.99	7120.94	-540.13	-521.38	774.04	17.70
7522.00	75.05	353.05	7134.39	-495.28	-476.64	768.96	7.44
7574.00	81.64	354.77	7144.89	-444.56	-426.03	763.57	13.07
7658.00	88.66	354.97	7151.99	-361.09	-342.72	756.08	8.36
7752.00	88.82	354.01	7154.05	-267.35	-249.17	747.06	1.04
7847.00	89.30	354.44	7155.61	-172.64	-154.67	737.50	0.67
7942.00	88.49	354.19	7157.44	-77.93	-60.16	728.09	0.88
8036.00	88.73	354.78	7159.72	15.80	33.38	719.06	0.67
8131.00	88.49	356.43	7162.02	110.64	128.07	711.79	1.75
8226.00	88.83	356.35	7164.24	205.55	222.86	705.80	0.36
8320.00	89.16	357.12	7165.89	299.48	316.69	700.45	0.90
8415.00	89.90	356.66	7166.67	394.43	411.54	695.30	0.92

MD ft	INC deg	AZIM deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft
8509.00	88.76	356.93	7167.77	488.38	505.39	690.04	1.25
8604.00	88.63	356.59	7169.94	583.31	600.21	684.67	0.39
8698.00	88.42	357.04	7172.36	677.23	694.04	679.45	0.53
8793.00	89.69	357.24	7173.92	772.18	788.90	674.71	1.35
8887.00	90.03	358.20	7174.14	866.17	882.83	670.97	1.09
8982.00	91.61	357.86	7172.78	961.15	977.76	667.71	1.70
9076.00	93.12	357.40	7168.91	1055.06	1071.59	663.82	1.68
9171.00	92.32	357.12	7164.40	1149.92	1166.38	659.29	0.89
9265.00	90.67	355.77	7161.95	1243.82	1260.16	653.47	2.27
9360.00	89.16	355.40	7162.09	1338.68	1354.88	646.15	1.64
9455.00	88.69	356.27	7163.87	1433.56	1449.61	639.25	1.04
9549.00	89.09	357.98	7165.68	1527.50	1543.47	634.53	1.87
9644.00	89.43	358.60	7166.91	1622.49	1638.42	631.70	0.75
9738.00	88.99	359.83	7168.20	1716.48	1732.40	630.41	1.38
9832.00	89.33	0.00	7169.57	1810.44	1826.39	630.27	0.40
9926.00	90.07	1.22	7170.07	1904.38	1920.38	631.27	1.52
10020.00	90.00	0.37	7170.01	1998.31	2014.37	632.58	0.91
10114.00	90.34	0.17	7169.74	2092.27	2108.37	633.03	0.41
10208.00	89.36	0.38	7169.99	2186.23	2202.36	633.48	1.06
10302.00	88.92	359.49	7171.39	2280.19	2296.35	633.37	1.05
10397.00	88.42	359.61	7173.59	2375.15	2391.32	632.63	0.55
10491.00	89.67	359.83	7175.17	2469.12	2485.31	632.17	1.35
10585.00	89.76	359.48	7175.63	2563.10	2579.30	631.61	0.39
10679.00	89.97	359.16	7175.85	2657.09	2673.30	630.50	0.40
10774.00	90.00	357.59	7175.88	2752.09	2768.26	627.81	1.66
10868.00	89.56	359.34	7176.24	2846.09	2862.22	625.29	1.92
10962.00	89.37	0.84	7177.12	2940.05	2956.21	625.43	1.61
11056.00	89.53	0.22	7178.02	3033.99	3050.20	626.30	0.68
11151.00	89.83	0.50	7178.55	3128.94	3145.20	626.90	0.43
11245.00	89.53	359.40	7179.07	3222.91	3239.19	626.81	1.22
11340.00	89.76	1.35	7179.66	3317.86	3334.19	627.43	2.07
11434.00	89.46	0.46	7180.29	3411.78	3428.17	628.92	1.00
11528.00	90.07	1.27	7180.68	3505.71	3522.16	630.34	1.07

MD ft	INC deg	AZIM deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft
11623.00	90.64	1.02	7180.09	3600.61	3617.14	632.23	0.66
11717.00	91.17	359.64	7178.61	3694.55	3711.12	632.77	1.57
11811.00	91.41	359.46	7176.49	3788.52	3805.09	632.03	0.32
11906.00	90.57	0.47	7174.85	3883.47	3900.08	631.96	1.38
12000.00	90.91	0.93	7173.64	3977.40	3994.06	633.11	0.61
12094.00	89.73	359.96	7173.12	4071.35	4088.06	633.83	1.62
12188.00	90.17	359.94	7173.20	4165.32	4182.06	633.76	0.47
12283.00	90.57	359.35	7172.59	4260.30	4277.05	633.17	0.75
12377.00	90.97	358.96	7171.32	4354.29	4371.03	631.79	0.60
12471.00	89.73	359.59	7170.74	4448.28	4465.02	630.60	1.48
12566.00	89.97	358.69	7170.99	4543.28	4560.01	629.18	0.98
12659.00	88.56	0.06	7172.19	4636.25	4652.99	628.17	2.11
12751.00	89.53	0.66	7173.73	4728.20	4744.97	628.74	1.24
12844.00	89.33	0.40	7174.65	4821.14	4837.97	629.60	0.35
12936.00	89.63	359.49	7175.49	4913.11	4929.96	629.52	1.04
13028.00	89.83	359.31	7175.92	5005.10	5021.95	628.56	0.29
13119.00	89.90	358.76	7176.13	5096.10	5112.94	627.04	0.61
13211.00	90.00	358.43	7176.21	5188.10	5204.91	624.79	0.38
13327.00	90.48	357.77	7175.72	5304.09	5320.85	620.94	0.71