

Devon

PATHFINDER
A Schlumberger Company

WELL			FIELD			PRESERVE		
Devon Harroun Trust 31-30 RSH			NM Eddy County (MAD 88)					
Magdalen Petroleum Acct# 000000001	By: Mag Bar	6480" 7.130"	Upl: P/B	October 26, 2012 0405:00Z	Surface Location Lat: N 31 30 15.45N Long: W 104 1 4.98W	MAHOB State Machine Data File, Entry Item, 04 Plot Mapping: 0405:00 0405 Old Corr: 0.460" Scale Factor: 1.00000007	Minimums Sp: Runway Total 11-05 05M Plat: 0405:00 24-02-02	TVD Ref: 270355.19 (Jans 1) Avg Elev: October 26, 2012

1. PURPOSE
SURVEY FOR THE 31-30 RSH WELL TO BE DRILLED BY
MAGDALEN PETROLEUM TO A DEPTH OF 10,000 FEET.
THIS SURVEY IS TO BE USED TO DETERMINE THE
LOCATION OF THE WELL AND TO PROVIDE A BASIS FOR
THE DESIGN OF THE WELL.

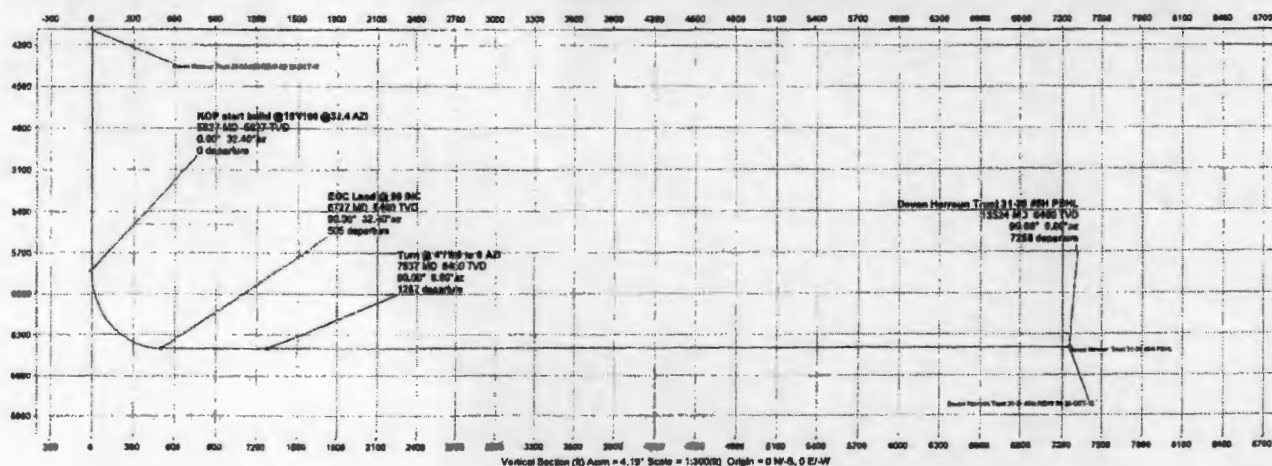
Oil Conservation Division

Case No. 148
Exhibit No. 148

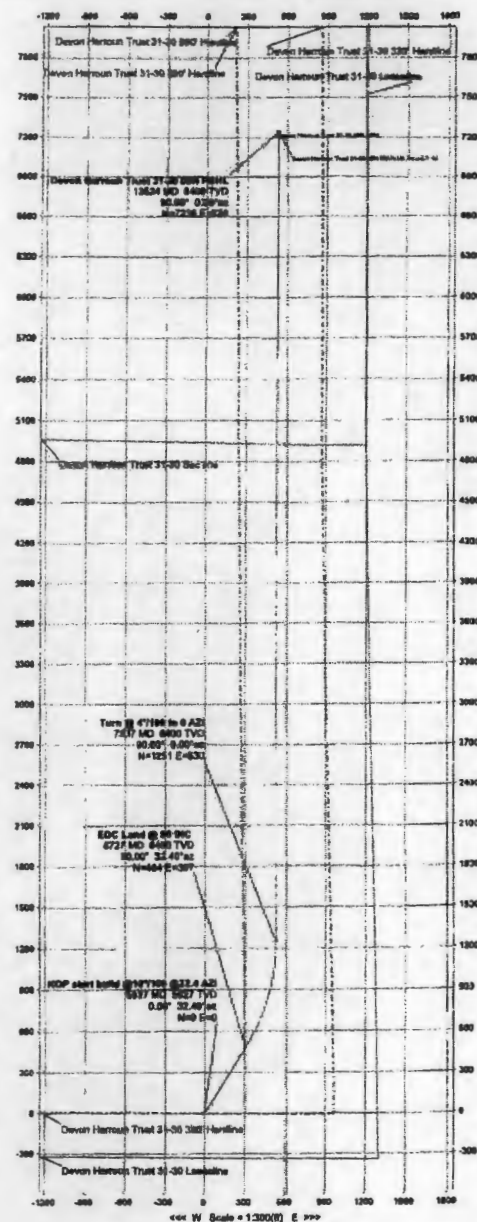


Old Well
To Old Well (107.500')
Mag Bar (1.000')
Old Well (0.000')

Critical Points														
Comments	Survey Wd (ft)	Refraction (deg)	Azimuth (deg)	TVD (ft)	Sub-Sea TVD	VS (ft)	NS (ft)	EW (ft)	Latitude (deg)	Longitude (deg)	Easting (ft)	Northing (ft)	Closure (ft)	Closure Azimuth (deg)
Te-In	0.00	0.00	32.40	0.00	-2982.30	0.00	0.00	0.00	N 32 15 18.430 W 104 1 9.998		638369.30	456607.50	0.00	0.00
KOP start build @ 107100 @ 32.4 AZ	5827.04	0.00	32.40	5827.04	2944.74	0.00	0.00	0.00	N 32 15 18.430 W 104 1 9.998		638369.30	456607.50	0.00	0.00
EOC Land @ 90 WC	6727.04	90.00	32.40	6400.00	3417.70	504.00	483.76	397.91	N 32 15 23.206 W 104 1 6.407		638676.26	457171.32	572.95	32.40
Turn @ 47100 to 0 AZ	7537.83	90.00	0.00	6400.00	3417.70	1286.63	1251.27	529.59	N 32 15 30.796 W 104 1 3.784		638899.25	457938.78	1358.84	22.98
Devon Harroun Trust 31-30 RSH PSH	13523.95	90.00	0.00	6400.00	3417.70	7257.58	7239.19	530.04	N 32 16 30.037 W 104 1 3.578		638899.30	463925.20	7257.58	4.19



Scale = 1:3000 (ft)



Drawn By: Sam Affa
Data Checked: October 26, 2012 10:22:41 AM
Checked By:
Checked Date:
Approved By:
Approved Date:



Devon Harroun Trust 31-30 #5H REV0 SB 26-OCT-12 Proposal Geodetic
Report
(Def Plan)



Report Date: October 26, 2012 - 02:39 PM
Client: Devon
Field: NM Eddy County (NAD 83)
Structure / Slot: Devon Harroun Trust 31-30 #5H / Devon Harroun Trust 31-30 #5H
Well: Devon Harroun Trust 31-30 #5H
Borehole: Original Borehole
UWI / API#: Unknown / Unknown
Survey Name: Devon Harroun Trust 31-30 #5H REV0 SB 26-OCT-12
Survey Date: October 26, 2012
Tort / AMD / DD / ERD Ratio: 122.309' / 7309.873 ft / 6.280 / 1.152
Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: N 32° 15' 18.43039", W 104° 1' 9.99808"
Location Grid N/E Y/X: N 450687.600 NUS, E 636369.300 NUS
CRS Grid Convergence Angle: 0.1875°
Grid Scale Factor: 0.99991087

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 4.188° (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: KB
TVD Reference Elevation: 2982.300 ft above
Sealed / Ground Elevation: 2957.300 ft above
Magnetic Declination: 7.729°
Total Gravity Field Strength: 988.2095 mgn (9.8 based)
Total Magnetic Field Strength: 48435.788 nT
Magnetic Dip Angle: 60.063°
Declination Date: October 26, 2012
Magnetic Declination Model: BGM 2012
North Reference: Grid North
Grid Convergence Used: 0.1875°
Total Corr Mag North->Grid North: 7.5619°
Local Coord Referenced To: Structure Reference Point

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VS&C (ft)	NS (ft)	EW (ft)	DLS (ft)	Northings (ft)	Eastings (ft)	Latitude (N 00° 00')	Longitude (W 00° 00')
Tie-In	0.00	0.00	32.40	0.00	0.00	0.00	0.00	0.00	450687.60	636369.30	N 32 15 18.43 W 104 1	10.00
	100.00	0.00	32.40	100.00	0.00	0.00	0.00	0.00	450687.60	636369.30	N 32 15 18.43 W 104 1	10.00
	200.00	0.00	32.40	200.00	0.00	0.00	0.00	0.00	450687.60	636369.30	N 32 15 18.43 W 104 1	10.00
	300.00	0.00	32.40	300.00	0.00	0.00	0.00	0.00	450687.60	636369.30	N 32 15 18.43 W 104 1	10.00
	400.00	0.00	32.40	400.00	0.00	0.00	0.00	0.00	450687.60	636369.30	N 32 15 18.43 W 104 1	10.00
	500.00	0.00	32.40	500.00	0.00	0.00	0.00	0.00	450687.60	636369.30	N 32 15 18.43 W 104 1	10.00
	600.00	0.00	32.40	600.00	0.00	0.00	0.00	0.00	450687.60	636369.30	N 32 15 18.43 W 104 1	10.00
	700.00	0.00	32.40	700.00	0.00	0.00	0.00	0.00	450687.60	636369.30	N 32 15 18.43 W 104 1	10.00
	800.00	0.00	32.40	800.00	0.00	0.00	0.00	0.00	450687.60	636369.30	N 32 15 18.43 W 104 1	10.00
	900.00	0.00	32.40	900.00	0.00	0.00	0.00	0.00	450687.60	636369.30	N 32 15 18.43 W 104 1	10.00
	1000.00	0.00	32.40	1000.00	0.00	0.00	0.00	0.00	450687.60	636369.30	N 32 15 18.43 W 104 1	10.00
	1100.00	0.00	32.40	1100.00	0.00	0.00	0.00	0.00	450687.60	636369.30	N 32 15 18.43 W 104 1	10.00
	1200.00	0.00	32.40	1200.00	0.00	0.00	0.00	0.00	450687.60	636369.30	N 32 15 18.43 W 104 1	10.00
	1300.00	0.00	32.40	1300.00	0.00	0.00	0.00	0.00	450687.60	636369.30	N 32 15 18.43 W 104 1	10.00
	1400.00	0.00	32.40	1400.00	0.00	0.00	0.00	0.00	450687.60	636369.30	N 32 15 18.43 W 104 1	10.00
	1500.00	0.00	32.40	1500.00	0.00	0.00	0.00	0.00	450687.60	636369.30	N 32 15 18.43 W 104 1	10.00
	1600.00	0.00	32.40	1600.00	0.00	0.00	0.00	0.00	450687.60	636369.30	N 32 15 18.43 W 104 1	10.00
	1700.00	0.00	32.40	1700.00	0.00	0.00	0.00	0.00	450687.60	636369.30	N 32 15 18.43 W 104 1	10.00
	1800.00	0.00	32.40	1800.00	0.00	0.00	0.00	0.00	450687.60	636369.30	N 32 15 18.43 W 104 1	10.00
	1900.00	0.00	32.40	1900.00	0.00	0.00	0.00	0.00	450687.60	636369.30	N 32 15 18.43 W 104 1	10.00
	2000.00	0.00	32.40	2000.00	0.00	0.00	0.00	0.00	450687.60	636369.30	N 32 15 18.43 W 104 1	10.00
	2100.00	0.00	32.40	2100.00	0.00	0.00	0.00	0.00	450687.60	636369.30	N 32 15 18.43 W 104 1	10.00
	2200.00	0.00	32.40	2200.00	0.00	0.00	0.00	0.00	450687.60	636369.30	N 32 15 18.43 W 104 1	10.00
	2300.00	0.00	32.40	2300.00	0.00	0.00	0.00	0.00	450687.60	636369.30	N 32 15 18.43 W 104 1	10.00
	2400.00	0.00	32.40	2400.00	0.00	0.00	0.00	0.00	450687.60	636369.30	N 32 15 18.43 W 104 1	10.00
	2500.00	0.00	32.40	2500.00	0.00	0.00	0.00	0.00	450687.60	636369.30	N 32 15 18.43 W 104 1	10.00
	2600.00	0.00	32.40	2600.00	0.00	0.00	0.00	0.00	450687.60	636369.30	N 32 15 18.43 W 104 1	10.00
	2700.00	0.00	32.40	2700.00	0.00	0.00	0.00	0.00	450687.60	636369.30	N 32 15 18.43 W 104 1	10.00
	2800.00	0.00	32.40	2800.00	0.00	0.00	0.00	0.00	450687.60	636369.30	N 32 15 18.43 W 104 1	10.00
	2900.00	0.00	32.40	2900.00	0.00	0.00	0.00	0.00	450687.60	636369.30	N 32 15 18.43 W 104 1	10.00
	3000.00	0.00	32.40	3000.00	0.00	0.00	0.00	0.00	450687.60	636369.30	N 32 15 18.43 W 104 1	10.00
	3100.00	0.00	32.40	3100.00	0.00	0.00	0.00	0.00	450687.60	636369.30	N 32 15 18.43 W 104 1	10.00
	3200.00	0.00	32.40	3200.00	0.00	0.00	0.00	0.00	450687.60	636369.30	N 32 15 18.43 W 104 1	10.00
	3300.00	0.00	32.40	3300.00	0.00	0.00	0.00	0.00	450687.60	636369.30	N 32 15 18.43 W 104 1	10.00
	3400.00	0.00	32.40	3400.00	0.00	0.00	0.00	0.00	450687.60	636369.30	N 32 15 18.43 W 104 1	10.00
	3500.00	0.00	32.40	3500.00	0.00	0.00	0.00	0.00	450687.60	636369.30	N 32 15 18.43 W 104 1	10.00
	3600.00	0.00	32.40	3600.00	0.00	0.00	0.00	0.00	450687.60	636369.30	N 32 15 18.43 W 104 1	10.00
	3700.00	0.00	32.40	3700.00	0.00	0.00	0.00	0.00	450687.60	636369.30	N 32 15 18.43 W 104 1	10.00
	3800.00	0.00	32.40	3800.00	0.00	0.00	0.00	0.00	450687.60	636369.30	N 32 15 18.43 W 104 1	10.00
	3900.00	0.00	32.40	3900.00	0.00	0.00	0.00	0.00	450687.60	636369.30	N 32 15 18.43 W 104 1	10.00
	4000.00	0.00	32.40	4000.00	0.00	0.00	0.00	0.00	450687.60	636369.30	N 32 15 18.43 W 104 1	10.00
	4100.00	0.00	32.40	4100.00	0.00	0.00	0.00	0.00	450687.60	636369.30	N 32 15 18.43 W 104 1	10.00
	4200.00	0.00	32.40	4200.00	0.00	0.00	0.00	0.00	450687.60	636369.30	N 32 15 18.43 W 104 1	10.00
	4300.00	0.00	32.40	4300.00	0.00	0.00	0.00	0.00	450687.60	636369.30	N 32 15 18.43 W 104 1	10.00
	4400.00	0.00	32.40	4400.00	0.00	0.00	0.00	0.00	450687.60	636369.30	N 32 15 18.43 W 104 1	10.00
	4500.00	0.00	32.40	4500.00	0.00	0.00	0.00	0.00	450687.60	636369.30	N 32 15 18.43 W 104 1	10.00
	4600.00	0.00	32.40	4600.00	0.00	0.00	0.00	0.00	450687.60	636369.30	N 32 15 18.43 W 104 1	10.00
	4700.00	0.00	32.40	4700.00	0.00	0.00	0.00	0.00	450687.60	636369.30	N 32 15 18.43 W 104 1	10.00
	4800.00	0.00	32.40	4800.00	0.00	0.00	0.00	0.00	450687.60	636369.30	N 32 15 18.43 W 104 1	10.00
	4900.00	0.00	32.40	4900.00	0.00	0.00	0.00	0.00	450687.60	636369.30	N 32 15 18.43 W 104 1	10.00
	5000.00	0.00	32.40	5000.00	0.00	0.00	0.00	0.00	450687.60	636369.30	N 32 15 18.43 W 104 1	10.00
	5100.00	0.00	32.40	5100.00	0.00	0.00	0.00	0.00	450687.60	636369.30	N 32 15 18.43 W 104 1	10.00
	5200.00	0.00	32.40	5200.00	0.00	0.00	0.00	0.00	450687.60	636369.30	N 32 15 18.43 W 104 1	10.00
	5300.00	0.00	32.40	5300.00	0.00	0.00	0.00	0.00	450687.60	636369.30	N 32 15 18.43 W 104 1	10.00
	5400.00	0.00	32.40	5400.00	0.00	0.00	0.00	0.00	450687.60	636369.30	N 32 15 18.43 W 104 1	10.00
	5500.00	0.00	32.40	5500.00	0.00	0.00	0.00	0.00	450687.60	636369.30	N 32 15 18.43 W 104 1	10.00
	5600.00	0.00	32.40	5600.00	0.00	0.00	0.00	0.00	450687.60	636369.30	N 32 15 18.43 W 104 1	10.00
	5700.00	0.00	32.40	5700.00	0.00	0.00	0.00	0.00	450687.60	636369.30	N 32 15 18.43 W 104 1	10.00
	5800.00	0.00	32.40	5800.00	0.00	0.00	0.00	0.00	450687.60	636369.30	N 32 15 18.43 W 104 1	10.00

Comments	MD (ft)	Incl (°)	Asim Grid (°)	TVD (ft)	VSEC (ft)	MS (ft)	EW (ft)	DLS (ft/100ft)	Northing (ft)	Easting (ft)	Latitude (N/S ° ° ' '')	Longitude (W/E ° ° ' '')
NOP dip (ft) @10°/100 @32.4 AZI	5627.04	0.00	32.40	5627.04	0.00	0.00	0.00	0.00	456997.80	636388.30	N 32 15 18.43 W 104 1	10.00
	5900.00	7.30	32.40	5896.80	4.00	3.92	2.49	10.00	456991.52	636371.70	N 32 15 18.47 W 104 1	9.97
	6000.00	17.30	32.40	5907.39	22.63	21.85	13.88	10.00	456709.47	636383.16	N 32 15 18.85 W 104 1	9.84
	6100.00	27.30	32.40	6089.79	56.22	53.87	34.19	10.00	456741.46	636403.48	N 32 15 18.95 W 104 1	9.60
	6200.00	37.30	32.40	6174.21	103.24	96.92	62.78	10.00	456785.51	636432.07	N 32 15 19.41 W 104 1	9.26
	6300.00	47.30	32.40	6248.09	162.47	155.67	98.79	10.00	456843.26	636468.08	N 32 15 19.87 W 104 1	8.84
	6400.00	57.30	32.40	6309.17	232.10	222.39	141.13	10.00	456909.97	636510.42	N 32 15 20.63 W 104 1	8.35
	6500.00	67.30	32.40	6355.60	310.02	297.05	188.51	10.00	456984.82	636557.80	N 32 15 21.36 W 104 1	7.79
	6600.00	77.30	32.40	6385.97	393.86	377.38	239.49	10.00	457004.85	636606.77	N 32 15 22.18 W 104 1	7.20
	6700.00	87.30	32.40	6399.36	481.08	460.94	292.52	10.00	457148.50	636661.80	N 32 15 22.99 W 104 1	6.58
EOC Land @ 90 INC	6727.04	90.00	32.40	6400.00	504.89	483.78	307.01	10.00	457171.32	636678.26	N 32 15 23.21 W 104 1	6.41
	6800.00	90.00	29.48	6400.00	570.04	546.34	344.51	4.00	457233.89	636713.79	N 32 15 23.63 W 104 1	5.97
	6900.00	90.00	25.48	6400.00	661.87	635.03	390.85	4.00	457322.58	636759.92	N 32 15 24.70 W 104 1	5.43
	7000.00	90.00	21.48	6400.00	758.23	726.73	430.49	4.00	457414.27	636799.75	N 32 15 25.81 W 104 1	4.98
	7100.00	90.00	17.48	6400.00	852.87	820.99	463.83	4.00	457508.52	636833.09	N 32 15 26.54 W 104 1	4.57
	7200.00	90.00	13.46	6400.00	950.72	917.34	490.52	4.00	457604.87	636859.78	N 32 15 27.49 W 104 1	4.25
	7300.00	90.00	9.48	6400.00	1049.89	1015.32	510.42	4.00	457702.84	636879.68	N 32 15 28.46 W 104 1	4.02
	7400.00	90.00	5.48	6400.00	1149.70	1114.45	523.44	4.00	457801.96	636892.70	N 32 15 29.44 W 104 1	3.88
	7500.00	90.00	1.48	6400.00	1249.87	1214.24	529.51	4.00	457901.74	636906.77	N 32 15 30.43 W 104 1	3.79
Turn @ 4°/100 to 9 AZI	7537.03	90.00	0.00	6400.00	1286.63	1251.27	529.99	4.00	457938.76	636909.25	N 32 15 30.60 W 104 1	3.78
	7600.00	90.00	0.00	6400.00	1349.44	1314.24	529.99	0.00	458001.73	636909.25	N 32 15 31.42 W 104 1	3.78
	7700.00	90.00	0.00	6400.00	1449.17	1414.24	529.99	0.00	458101.72	636909.25	N 32 15 32.41 W 104 1	3.78
	7800.00	90.00	0.00	6400.00	1549.90	1514.24	529.99	0.00	458201.72	636909.25	N 32 15 33.40 W 104 1	3.77
	7900.00	90.00	0.00	6400.00	1649.64	1614.24	529.99	0.00	458301.71	636909.25	N 32 15 34.39 W 104 1	3.77
	8000.00	90.00	0.00	6400.00	1749.37	1714.24	529.99	0.00	458401.70	636909.25	N 32 15 35.38 W 104 1	3.77
	8100.00	90.00	0.00	6400.00	1849.10	1814.24	529.99	0.00	458501.69	636909.25	N 32 15 36.37 W 104 1	3.78
	8200.00	90.00	0.00	6400.00	1947.83	1914.24	530.00	0.00	458601.68	636909.25	N 32 15 37.36 W 104 1	3.76
	8300.00	90.00	0.00	6400.00	2047.57	2014.24	530.00	0.00	458701.67	636909.25	N 32 15 38.35 W 104 1	3.76
	8400.00	90.00	0.00	6400.00	2147.30	2114.24	530.00	0.00	458801.67	636909.25	N 32 15 39.34 W 104 1	3.75
	8500.00	90.00	0.00	6400.00	2247.03	2214.24	530.00	0.00	458901.66	636909.26	N 32 15 40.33 W 104 1	3.75
	8600.00	90.00	0.00	6400.00	2346.77	2314.24	530.00	0.00	459001.65	636909.26	N 32 15 41.31 W 104 1	3.75
	8700.00	90.00	0.00	6400.00	2446.50	2414.24	530.00	0.00	459101.64	636909.26	N 32 15 42.30 W 104 1	3.74
	8800.00	90.00	0.00	6400.00	2546.23	2514.24	530.00	0.00	459201.63	636909.26	N 32 15 43.29 W 104 1	3.74
	8900.00	90.00	0.00	6400.00	2645.97	2614.24	530.00	0.00	459301.62	636909.26	N 32 15 44.28 W 104 1	3.74
	9000.00	90.00	0.00	6400.00	2745.70	2714.24	530.00	0.00	459401.62	636909.26	N 32 15 45.27 W 104 1	3.73
	9100.00	90.00	0.00	6400.00	2845.43	2814.24	530.00	0.00	459501.61	636909.26	N 32 15 46.26 W 104 1	3.73
	9200.00	90.00	0.00	6400.00	2945.17	2914.24	530.00	0.00	459601.60	636909.26	N 32 15 47.25 W 104 1	3.73
	9300.00	90.00	0.00	6400.00	3044.90	3014.24	530.01	0.00	459701.59	636909.26	N 32 15 48.24 W 104 1	3.72
	9400.00	90.00	0.00	6400.00	3144.63	3114.24	530.01	0.00	459801.58	636909.26	N 32 15 49.23 W 104 1	3.72
	9500.00	90.00	0.00	6400.00	3244.36	3214.24	530.01	0.00	459901.58	636909.26	N 32 15 50.22 W 104 1	3.72
	9600.00	90.00	0.00	6400.00	3344.10	3314.24	530.01	0.00	460001.57	636909.26	N 32 15 51.21 W 104 1	3.71
	9700.00	90.00	0.00	6400.00	3443.83	3414.24	530.01	0.00	460101.56	636909.27	N 32 15 52.20 W 104 1	3.71
	9800.00	90.00	0.00	6400.00	3543.56	3514.24	530.01	0.00	460201.55	636909.27	N 32 15 53.19 W 104 1	3.71
	9900.00	90.00	0.00	6400.00	3643.30	3614.24	530.01	0.00	460301.54	636909.27	N 32 15 54.18 W 104 1	3.70
	10000.00	90.00	0.00	6400.00	3743.03	3714.24	530.01	0.00	460401.53	636909.27	N 32 15 55.17 W 104 1	3.70
	10100.00	90.00	0.00	6400.00	3842.76	3814.24	530.01	0.00	460501.53	636909.27	N 32 15 56.16 W 104 1	3.70
	10200.00	90.00	0.00	6400.00	3942.50	3914.24	530.01	0.00	460601.52	636909.27	N 32 15 57.15 W 104 1	3.69
	10300.00	90.00	0.00	6400.00	4042.23	4014.24	530.01	0.00	460701.51	636909.27	N 32 15 58.14 W 104 1	3.69
	10400.00	90.00	0.00	6400.00	4141.96	4114.24	530.02	0.00	460801.50	636909.27	N 32 15 59.13 W 104 1	3.69
	10500.00	90.00	0.00	6400.00	4241.69	4214.24	530.02	0.00	460901.49	636909.27	N 32 16 0.12 W 104 1	3.68
	10600.00	90.00	0.00	6400.00	4341.43	4314.24	530.02	0.00	461001.49	636909.27	N 32 16 1.10 W 104 1	3.68
	10700.00	90.00	0.00	6400.00	4441.16	4414.24	530.02	0.00	461101.48	636909.27	N 32 16 2.09 W 104 1	3.68
	10800.00	90.00	0.00	6400.00	4540.89	4514.24	530.02	0.00	461201.47	636909.28	N 32 16 3.08 W 104 1	3.67
	10900.00	90.00	0.00	6400.00	4640.63	4614.24	530.02	0.00	461301.46	636909.28	N 32 16 4.07 W 104 1	3.67
	11000.00	90.00	0.00	6400.00	4740.36	4714.24	530.02	0.00	461401.45	636909.28	N 32 16 5.06 W 104 1	3.66
	11100.00	90.00	0.00	6400.00	4840.09	4814.24	530.02	0.00	461501.44	636909.28	N 32 16 6.05 W 104 1	3.66
	11200.00	90.00	0.00	6400.00	4939.83	4914.24	530.02	0.00	461601.44	636909.28	N 32 16 7.04 W 104 1	3.66
	11300.00	90.00	0.00	6400.00	5039.56	5014.24	530.02	0.00	461701.43	636909.28	N 32 16 8.03 W 104 1	3.65
	11400.00	90.00	0.00	6400.00	5139.29	5114.24	530.02	0.00	461801.42	636909.28	N 32 16 9.02 W 104 1	3.65
	11500.00	90.00	0.00	6400.00	5239.02	5214.24	530.03	0.00	461901.41	636909.28	N 32 16 10.01 W 104 1	3.65
	11600.00	90.00	0.00	6400.00	5338.76	5314.24	530.03	0.00	462001.40	636909.28	N 32 16 11.00 W 104 1	3.64
	11700.00	90.00	0.00	6400.00	5438.49	5414.24	530.03	0.00	462101.39	636909.28	N 32 16 11.99 W 104 1	3.64
	11800.00	90.00	0.00	6400.00	5538.22	5514.24	530.03	0.00	462201.39	636909.28	N 32 16 12.98 W 104 1	3.64
	11900.00	90.00	0.00	6400.00	5637.96	5614.24	530.03	0.00	462301.38	636909.29	N 32 16 13.97 W 104 1	3.63
	12000.00	90.00	0.00	6400.00	5737.69	5714.24	530.03	0.00	462401.37	636909.29	N 32 16 14.96 W 104 1	3.63
	12100.00	90.00	0.00	6400.00	5837.42	5814.24	530.03	0.00	462501.36	636909.29	N 32 16 15.95 W 104 1	3.63
	12200.00	90.00	0.00	6400.00	5937.16	5914.24	530.03	0.00	462601.35	636909.29	N 32 16 16.94 W 104 1	3.62
	12300.00	90.00	0.00	6400.00	6036.89	6014.24	530.03	0.00	462701.35	636909.29	N 32 16 17.93 W 104 1	3.62
	12400.00	90.00	0.00	6400.00	6136.63	6114.24	530.03	0.00	462801.34	636909.29	N 32 16 18.92 W 104 1	3.62
	12500.00	90.00	0.00	6400.00	6236.36	6214.24	530.03	0.00	462901.33	636909.29	N 32 16 19.91 W 104 1	3.61
	12600.00	90.00	0.00	6400.00	6336.09	6314.24	530.04	0.00	463001.32	636909.29	N 32 16 20.90 W 104 1	3.61
	12700.00	90.00	0.00	6400.00	6435.82	6414.24	530.04	0.00	463101.31	636909.29	N 32 16 21.88 W 104 1	3.61
	12800.00	90.00	0.00	6400.00	6535.55	6514.24	530.04	0.00	463201.30	636909.29	N 32 16 22.87 W 104 1	3.60
	12900.00	90.00	0.00	6400.00	6635.29	6614.24	530.04	0.00	463301.30	636909.29	N 32 16 23.86 W 104 1	3.60
	13000.00	90.00	0.00	6400.00	6735.02	6714.24	530.04	0.00	463401.29	636909.30	N 32 16 24.85 W 104 1	3.60
	13100.00	90.00	0.00	6400.00	6834.75	6814.24	530.04	0.00	463501.28	636909.30	N 32 16 25.84 W 104 1	3.59
	13200.00	90.00	0.00	6400.00	6934.49	6914.24	530.04	0.00	463601.27	636909.30	N 32 16 26.83 W 104 1	3

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	YSEC (ft)	NS (ft)	EW (ft)	DLS (ft/1000)	Northing (ft/1000)	Easting (ft/1000)	Latitude (N/S ° ° °)	Longitude (E/W ° ° °)
Devon Harroun Trust 31-30 #5H P6HL	13523.95	90.00	0.00	8400.00	7233.68	7214.34	830.04	9.00	463891.25	638899.30	N 32 16 28.80	W 104 1 3.88

Survey Type: Def Plan

Survey Error Model: ISCWSA Rev 0 *** 3-D 95.000% Confidence 2.7855 sigma
Survey Program:

Description	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Survey Tool Type	Borehole / Survey
	0.000	25.000	1/100,000	30.000	30.000	SLB_MWD-STD-Depth Only	Original Borehole / Devon Harroun Trust 31-30 #5H REV0
	25.000	13523.955	1/100,000	30.000	30.000	SLB_MWD-STD	Original Borehole / Devon Harroun Trust 31-30 #5H REV0

Devon Harroun Trust 31-30 #5H REV0 SB 26-OCT-12 Anti-Collision Summary Report

Analysis Date/Time: October 26, 2012 - 15:00
Client: Devon
Field: NM Eddy County (NAD 83)
Structure: Devon Harroun Trust 31-30 #5H
Slat: Devon Harroun Trust 31-30 #5H
Well: Devon Harroun Trust 31-30 #5H
Borehole: Original Borehole

Analysis Method: 3D Least Distance
Reference Trajectory: Devon Harroun Trust 31-30 #5H REV0 SB 26-OCT-12 (Def Plan)
Depth Interval: Every 10.00 Measured Depth (ft)
Rule Set: D&M Anti-Collision Standard S002 v5.1/5.2
Min Pts: All local minima indicated.

Offset Selection Criteria

Global within 54534.45 ft
Wellhead distance scan:
Selection filters:
Definitive Surveys - Definitive Plans - Definitive surveys exclude definitive plans
- All Non-Def Surveys when no Def-Survey is set in a borehole - All Non-Def Plans when no Def-Plan is set in a borehole

Offset Trajectories Summary

Offset Trajectory	Separation			Allow Dev. (ft)	Sep. Feet	Controlling Rule	Reference Trajectory		Risk Level			Alert	Status
	GS (ft)	MAS (ft)	EOU (ft)				MD (ft)	TVD (ft)	Alert	Minor	Major		
Chevron Sefal AV 20-2H Pilot Gyro (to 84500 MD) (Def Survey)													
13866.22	32.81	13862.88	13832.41	436702.94	MAS = 10.00 (m)	0.00	0.00					Pass	
13864.02	32.81	13860.70	13831.21	7614.47	MAS = 10.00 (m)	440.00	440.00					MinPts	
13864.32	32.81	13860.40	13831.51	5728.13	MAS = 10.00 (m)	500.00	500.00					MinPts-O-EQU	
13825.12	32.81	13808.81	13802.31	851.58	MAS = 10.00 (m)	3540.00	3540.00					MinPts	
13825.80	32.81	13809.17	13802.99	791.73	MAS = 10.00 (m)	4030.00	4030.00					MinPts-O-EQU	
13823.14	41.48	13804.84	13801.88	524.88	OSF 1.50	5850.00	5846.98					MinPts-CICI	
13823.15	41.54	13804.81	13801.81	523.82	OSF 1.50	5860.00	5856.98					MinPts-O-EQU	
13823.18	41.80	13804.81	13801.88	523.02	OSF 1.50	5870.00	5856.98					MinPts-O-ADP	
13118.88	170.06	13003.88	12947.74	118.78	OSF 1.50	11480.00	8400.00					MinPts-CICI	
13121.30	178.63	13001.24	12942.47	111.80	OSF 1.50	11750.00	8400.00					MinPts-O-EQU	
13124.85	182.75	13001.69	12941.76	109.20	OSF 1.50	11880.00	8400.00					MinPts-O-EQU	
13275.82	230.89	13120.88	13044.73	87.17	OSF 1.50	13523.95	8400.00					MinPts-O-SF	
Chevron Sefal AV 20-2H 6T01 gravelled OR to 110800 (Def Survey)													
13866.22	32.81	13862.88	13832.41	436702.94	MAS = 10.00 (m)	0.00	0.00					Pass	
13864.02	32.81	13860.70	13831.21	7614.47	MAS = 10.00 (m)	440.00	440.00					MinPts	
13864.32	32.81	13860.40	13831.51	5728.13	MAS = 10.00 (m)	500.00	500.00					MinPts-O-EQU	
13825.12	32.81	13808.81	13802.31	851.58	MAS = 10.00 (m)	3540.00	3540.00					MinPts	
13825.80	32.81	13809.17	13802.99	791.73	MAS = 10.00 (m)	4030.00	4030.00					MinPts-O-EQU	
13823.14	41.33	13805.21	13802.28	526.20	OSF 1.50	5830.00	5836.00					MinPts-CICI	
13823.15	41.38	13805.18	13802.22	525.87	OSF 1.50	5840.00	5840.00					MinPts-O-EQU	
13823.18	41.45	13805.19	13802.20	524.56	OSF 1.50	5850.00	5846.98					MinPts-O-ADP	
13127.30	171.11	13012.30	12958.19	116.78	OSF 1.50	11800.00	8400.00					MinPts	
13128.88	178.98	13008.74	12950.89	111.58	OSF 1.50	11780.00	8400.00					MinPts-O-EQU	
13133.37	183.20	13015.41	12960.18	109.00	OSF 1.50	11800.00	8400.00					MinPts-O-ADP	
13182.58	208.82	13042.58	12973.75	95.82	OSF 1.50	12710.00	8400.00					MinPts	
13222.45	225.18	13071.33	12998.61	88.89	OSF 1.50	13220.00	8400.00					MinPts	
13246.85	235.09	13068.58	13010.80	85.14	OSF 1.50	13523.95	8400.00					MinPts-O-SF	
Chevron Patus Farms 25-3 Gyro OR to 80880 (Def Survey)													
15135.38	32.81	15132.78	15102.55	174973.79	MAS = 10.00 (m)	0.00	0.00					Pass	
15099.58	50.59	15025.03	15009.00	489.70	OSF 1.50	8070.00	8082.78					MinPts	
15099.71	50.92	15024.93	15008.79	488.44	OSF 1.50	8140.00	8124.87					MinPts-CICI	
15098.83	81.07	15024.98	15008.76	485.00	OSF 1.50	8170.00	8148.98					MinPts-O-EQU	
13185.11	236.12	13028.86	12948.59	84.84	OSF 1.50	13523.95	8400.00					MinPts-O-ADP	
Chevron Patus Farms 25-4 Gyro OR to 81500 (Def Survey)													
15034.80	32.81	15032.34	15002.09	333999.55	MAS = 10.00 (m)	0.00	0.00					Pass	
15095.88	32.81	15004.33	15003.07	834.17	MAS = 10.00 (m)	3670.00	3670.00					MinPts	
15088.01	32.81	15003.62	15003.30	807.00	MAS = 10.00 (m)	3600.00	3600.00					MinPts	
15090.20	32.81	15003.62	15003.30	791.08	MAS = 10.00 (m)	3680.00	3680.00					MinPts-O-EQU	
15086.48	32.94	15003.68	15003.33	782.59	OSF 1.50	4020.00	4020.00					MinPts-O-ADP	
15086.59	33.03	15003.74	15003.36	780.20	OSF 1.50	4040.00	4040.00					MinPts-O-SF	
15086.85	33.82	15003.69	15003.05	793.47	OSF 1.50	4210.00	4210.00					MinPts-O-EQU	
15087.17	34.23	15003.53	15003.94	790.93	OSF 1.50	4300.00	4300.00					MinPts-O-ADP	
15086.27	36.44	15003.81	15003.31	801.78	OSF 1.50	4880.00	4880.00					MinPts-O-EQU	
15086.08	38.08	15003.98	15003.64	870.27	OSF 1.50	5110.00	5110.00					MinPts-O-EQU	
15086.84	38.72	15003.98	15003.22	867.84	OSF 1.50	5230.00	5230.00					MinPts-O-ADP	
13288.88	234.43	13131.58	13054.43	86.14	OSF 1.50	13523.95	8400.00					MinPts	
Chevron Patus Farms 26-2 Institution Only OR to 87770 (Def Survey)													
16878.08	32.81	16886.73	16845.27	2432.08	MAS = 10.00 (m)	0.00	0.00					Pass	
14181.57	237.20	14022.44	13844.37	90.80	OSF 1.50	13523.95	8400.00					Surface MinPts	
Chevron Patus Farms AV 25-1H Gyro-MWD OR to 82730 (Def Survey)													
18182.02	95.72	18127.37	18086.30	280.51	OSF 1.50	0.00	0.00					Pass	
14808.88	108.85	14733.07	14698.04	211.30	OSF 1.50	5950.00	5946.08					Surface	
14808.90	108.86	14733.06	14698.02	211.26	OSF 1.50	5960.00	5956.81					MinPts-CICI	
14389.58	206.58	14154.99	14098.96	105.04	OSF 1.50	11700.00	8400.00					MinPts	
14289.84	213.42	14152.73	14092.42	101.85	OSF 1.50	11860.00	8400.00					MinPts-CICI	
14287.04	215.00	14152.87	14092.04	100.93	OSF 1.50	12020.00	8400.00					MinPts-O-EQU	
14289.15	208.82	14158.04	14090.23	103.89	OSF 1.50	12110.00	8400.00					MinPts	
14346.04	233.00	14189.87	14113.04	93.34	OSF 1.50	13080.00	8400.00					MinPts-O-ADP	
14378.00	244.03	14215.48	14134.98	86.20	OSF 1.50	13523.95	8400.00					MinPts-O-SF	
Chevron Sefal BC 25-1H Rev0 src 5-Apr-12 (Def Plan)													
14888.85	32.81	14886.08	14855.86	147367.28	MAS = 10.00 (m)	0.00	0.00					Pass	
14888.65	58.73	14850.01	14831.93	411.73	OSF 1.50	5827.04	5827.04					Surface	
14888.68	58.86	14849.96	14831.84	410.85	OSF 1.50	5840.00	5840.00					MinPts-CICI	
14888.76	59.94	14849.98	14831.82	410.18	OSF 1.50	5850.00	5846.98					MinPts-O-EQU	
14444.88	178.19	14323.35	14288.79	123.31	OSF 1.50	11580.00	8400.00					MinPts-O-ADP	
14447.88	186.78	14322.90	14281.07	117.58	OSF 1.50	11870.00	8400.00					MinPts-CICI	
14451.33	190.94	14323.21	14280.40	115.02	OSF 1.50	12010.00	8400.00					MinPts-O-EQU	
14575.00	235.04	14417.47	14338.98	94.00	OSF 1.50	13523.95	8400.00					MinPts-O-ADP	

Offset Trajectory	Separation			Allow	Sep.	Controlling	Reference Trajectory		Risk Level			Alert	Status
	CS-01 (ft)	MAS (ft)	EOU (ft)				MD (ft)	TVD (ft)	Alert	Minor	Major		
Chevron Saffell SC 25-1H ST01 Rev0 mmd-4pr-12 (Non-Def Plan)													
	14885.65	32.81	14888.95	14885.65	147387.38	MAS = 10.00 (m)	0.00	0.00				Pass	Surface
	14885.65	53.02	14882.48	14835.84	441.88	OSF 1.30	5430.00	5430.00				MinP-CICl	
	14885.75	53.35	14882.34	14835.39	438.10	OSF 1.30	5480.00	5480.00				MNPT-O-EQU	
	14885.87	53.50	14882.37	14835.37	437.81	OSF 1.50	5580.00	5520.00				MinP-O-ADP	
	14485.22	179.55	14344.08	14285.67	122.53	OSF 1.50	11670.00	8400.00				MinP-CICl	
	14485.50	180.19	14341.54	14278.30	116.23	OSF 1.50	11680.00	8400.00				MNPT-O-EQU	
	14472.75	194.33	14342.36	14278.45	113.15	OSF 1.50	12180.00	8400.00				MinP-O-ADP	
	14898.04	237.46	14388.90	14318.58	92.91	OSF 1.50	13523.95	8400.00				MinP-O-SF	
Chevron Paradise Farms A/ 25-1H Gyro+ Ino Only OR to 19103R (Def Survey)													
	15204.18	32.81	15201.23	15271.37	35808.41	MAS = 10.00 (m)	0.00	0.00				Pass	Surface
	15201.62	43.21	15201.85	15188.39	588.14	OSF 1.30	4780.00	4780.00				MinP-CICl	
	15201.53	44.28	15201.18	15187.25	582.82	OSF 1.50	4970.00	4870.00				MinP-CICl	
	15201.45	44.80	15200.95	15186.86	576.82	OSF 1.50	5070.00	5070.00				MNPT-O-EQU	
	15201.38	48.24	15197.70	15182.13	621.04	OSF 1.50	5880.00	5888.98				MinP-CICl	
	15201.48	48.64	15197.55	15181.84	616.88	OSF 1.50	5930.00	5929.45				MNPT-O-EQU	
	15201.81	49.79	15197.55	15181.82	614.88	OSF 1.50	5980.00	5980.81				MinP-O-ADP	
	15207.23	53.35	15200.63	15183.85	478.93	OSF 1.50	6330.00	6287.85				MinP-O-ADP	
	14477.54	237.77	14318.20	14239.77	92.29	OSF 1.50	13523.95	8400.00				MinP-CICl	
Survey-Chevron Heritage 2-15 #1H Gyro+MWD OR to 12852R (Def Survey)													
	23895.99	32.81	23878.88	23895.09	3870.61	MAS = 10.00 (m)	0.00	0.00				Pass	Surface
	23894.62	73.23	23834.98	23811.38	508.81	OSF 1.30	870.00	870.00				MinP-CICl	
	23895.90	82.56	23830.02	23803.34	448.34	OSF 1.50	1240.00	1240.00				MinP-CICl	
	23848.77	194.02	23818.58	23754.75	187.87	OSF 1.50	3890.00	3890.00				MinP-CICl	
	23848.77	193.78	23818.74	23754.99	187.81	OSF 1.50	3710.00	3710.00				MinP-CICl	
	20018.40	514.44	18873.85	18803.95	59.78	OSF 1.50	13523.95	8400.00				MinP-CICl	
Chevron Heritage 2-15 #1H Gyro OR to 5448R MD (Def Survey)													
	23895.99	32.81	23878.88	23895.09	3870.61	MAS = 10.00 (m)	0.00	0.00				Pass	Surface
	23894.62	73.23	23834.98	23811.38	508.81	OSF 1.30	870.00	870.00				MinP-CICl	
	23895.90	82.56	23830.02	23803.34	448.34	OSF 1.50	1240.00	1240.00				MinP-CICl	
	23848.77	194.02	23818.58	23754.75	187.87	OSF 1.50	3890.00	3890.00				MinP-CICl	
	23848.77	193.78	23818.74	23754.99	187.81	OSF 1.50	3710.00	3710.00				MinP-CICl	
	20037.46	519.20	18888.75	18818.25	59.28	OSF 1.50	13523.95	8400.00				MinP-CICl	
Chevron Hymeyer A-3 Offset Inclination only OR to 8450R (Def Survey)													
	25242.80	32.81	25240.07	25210.08	76285.73	MAS = 10.00 (m)	0.00	0.00				Pass	Surface
	21345.10	1298.90	20904.12	20886.19	25.83	OSF 1.50	13523.95	8400.00				MinP-CICl	
Chevron Hymeyer 1 Offset Gyro OR to 8000R (Def Survey)													
	21872.00	32.81	21869.32	21838.10	142223.71	MAS = 10.00 (m)	0.00	0.00				Pass	Surface
	21826.98	214.58	21481.86	21412.00	184.78	OSF 1.50	13523.95	8400.00				MinP-CICl	
Chevron Hymeyer A-2 Offset Inclination only OR to 8148R (Def Survey)													
	28128.63	32.81	28125.70	28095.82	61048.83	MAS = 10.00 (m)	0.00	0.00				Pass	Surface
	28143.72	82.01	28101.54	28081.70	888.88	OSF 1.50	1310.00	1310.00				MNPT-O-EQU	
	21878.98	1103.74	21139.25	20773.21	28.87	OSF 1.50	13523.95	8400.00				MinP-CICl	
Chevron Heritage 2 15 #2H Rev1 MDT 10-OCT-12 (Def Plan)													
	28253.98	32.81	28250.95	28220.77	202248.12	MAS = 10.00 (m)	0.00	0.00				Pass	Surface
	21938.10	228.80	21782.14	21707.41	148.74	OSF 1.50	13523.95	8400.00				MinP-CICl	
Chevron Hymeyer A-1 Offset Inclination Only OR to 8380R (Def Survey)													
	27057.80	32.81	27054.85	27024.98	88042.23	MAS = 10.00 (m)	0.00	0.00				Pass	Surface
	22086.85	883.11	22086.21	21802.74	40.06	OSF 1.50	13523.95	8400.00				MinP-CICl	
Chesapeake PLU Big 6Inch 28 Fisher/1H Rev0 LDH 23-Sep-08 (Def Plan)													
	39533.13	107.35	39538.85	39525.78	581.54	OSF 1.50	0.00	0.00				Pass	Surface
	39538.82	114.08	39528.55	39782.78	843.74	OSF 1.50	5880.00	5886.87				MinP-CICl	
	44833.22	155.47	44825.74	44777.75	440.56	OSF 1.50	13523.95	8400.00				MinP-O-SF	
Southwestern Corbair 11 3H Rev0 LDH 11-Nov-08 (Non-Def Plan)													
	42800.11	32.81	42788.58	42787.30	41707.08	MAS = 10.00 (m)	0.00	0.00				Pass	Surface
	42800.11	48.25	42787.11	42751.88	1403.31	OSF 1.50	4730.00	4730.00				MinP-CICl	
	42800.33	48.68	42788.80	42781.43	1383.70	OSF 1.50	4870.00	4870.00				MNPT-O-EQU	
	42800.56	49.17	42788.94	42781.38	1378.50	OSF 1.50	4930.00	4930.00				MinP-O-ADP	
	48070.23	122.74	48987.57	48947.49	612.11	OSF 1.50	13523.95	8400.00				MinP-O-SF	
Survey Clay Daven 8 Fee 2H Gyro+MWD OR to 12121R (Def Survey)													
	45450.48	32.81	45447.25	45417.87	85287.44	MAS = 10.00 (m)	0.00	0.00				Pass	Surface
	45449.35	32.81	45445.38	45418.54	32443.32	MAS = 10.00 (m)	380.00	380.00				MinP-CICl	
	45433.09	32.81	45419.89	45400.28	4442.60	MAS = 10.00 (m)	2240.00	2240.00				MinP-CICl	
	45433.56	32.81	45419.22	45400.75	4092.56	MAS = 10.00 (m)	2470.00	2470.00				MNPT-O-EQU	
	45433.80	32.81	45419.22	45400.78	4078.42	MAS = 10.00 (m)	2480.00	2480.00				MinP-O-SF	
	45433.11	32.81	45418.85	45400.30	3473.32	MAS = 10.00 (m)	2880.00	2880.00				MinP-CICl	
	45434.12	32.81	45415.50	45401.31	3020.88	MAS = 10.00 (m)	3530.00	3530.00				MNPT-O-EQU	
	45436.38	32.81	45415.09	45402.55	2738.25	MAS = 10.00 (m)	3890.00	3890.00				MNPT-O-EQU	
	45441.85	34.90	45417.55	45408.75	2242.41	OSF 1.50	4820.00	4820.00				MinP-O-ADP	
	45446.88	36.68	45418.80	45407.21	1954.45	OSF 1.50	5610.00	5610.00				MinP-O-ADP	
	45982.18	45.53	45981.00	45936.98	1707.35	OSF 1.50	6880.00	6398.07				MinP-O-SF	
	54883.21	108.98	54911.72	54878.23	774.57	OSF 1.50	13523.95	8400.00				MinP-O-SF	