Schlumberger

MSD

Mean Square Dip

*A Mark of Schlumberger

Using the following logs: FMS/GR (Volume 2 5643-4166')

COMPANY: C. E. EXPLORATION
WELL: NEWBERRY #86-21
FIELD: NEWBERRY KGRA
COUNTY DESCHUTES
STATE OREGON
Date Logged: 29-Oct-1995 Date Processed: 02-Nov-1995
Well Location: 1000'N & 200'W OF SE CORNER SEC 21
Elevations: KB: DF: GL:
API Number: N/A Job Number: 13005556

CONFIDENTIAL

FOLD HERE The well name, location and borehole reference data were furnished by the customer.

All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages or expenses incurred or sustained by anyone resulting from any interpretations made by any of our officers, agents or employees. These interpretations are also sublect to Clause 4 of our General Terms and Conditions as set out in our current Price Schedule.

Field Recording:	Location: SACRAMENTO	Software Version:	Engineer: G. TRACY
Office Recording:	ICS Center: Bakersfield	Baseline: 2.0.1	Log Analyst: D.Rose

Mud and Borehole Measurements:

Rm @ Measured Temperature:	@	BHT:	Bitsize: 12.25in
Rmf @ Measured Temperature:	@	Type Fluid in Hole:	
Rmc @ Measured Temperature:	@	Mud Density:	

Remarks:

DEFINITIONS OF COMPUTATION PARAMETERS

MDEC- magnetic declination (degrees).

MODE- mode for search correlation (focalization).

1. = hole axis

2. = fixed plane given by FOCDIP and FOCAZM.

3. = a file determined by FOCFIL is used as the reference plane by zone

DECIM- number of fast channels skipped.

CORINT- correlation interval (feet).

STEP- step in ratio of CORINT.

SEARCH- search angle in degrees (if over 100 then a double search will be used).

example: 140. = 40 x 2.

FOCDIP- search correlation is focused on this plane dip when MODE = 2.

FOCAZM- search correlation is focused along this fixed plane azimuth when MODE = 2.

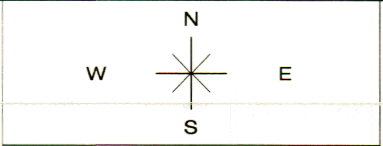
FOCFIL- name of the dip focalization file that is used when MODE = 3.

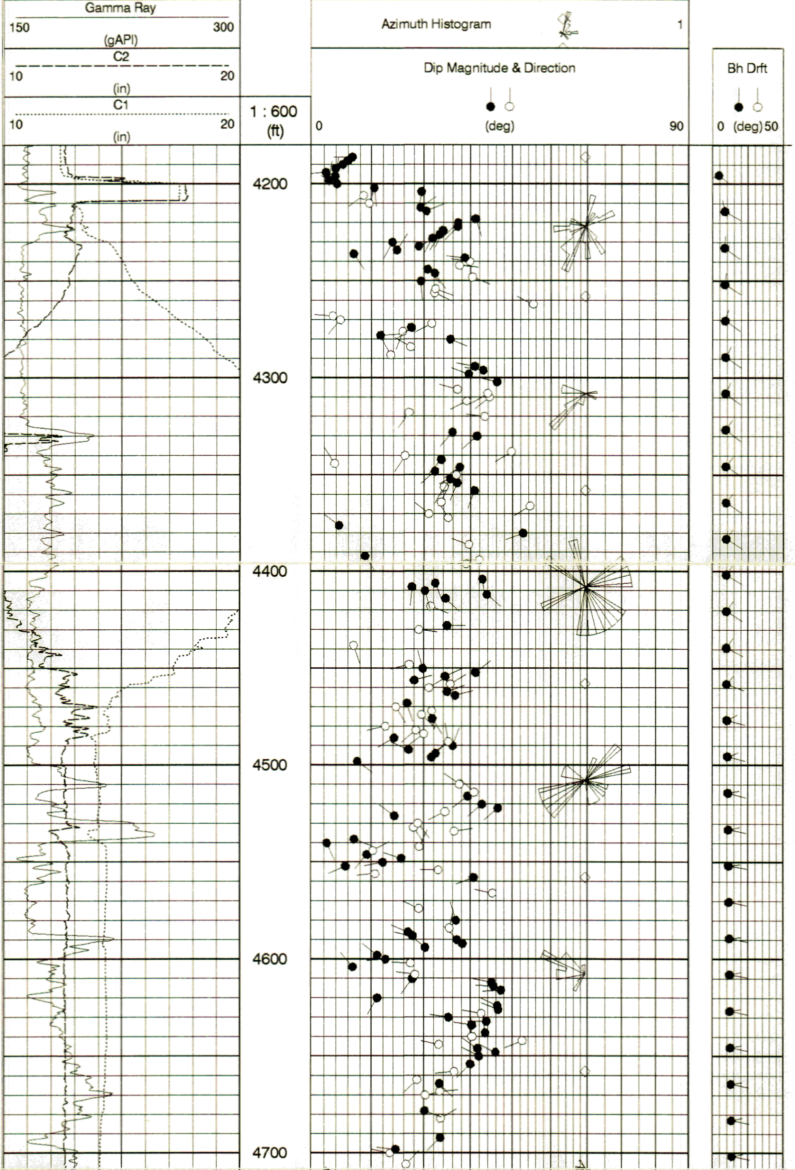
DEPTH INTERVAL		MDEC	MODE	DECIM	CORINT	STEP	SEARCH	FOCDIP	FOCAZM	FOCFIL
START	STOP									
5657.99ft	4180ft	17.2458deg	2	1	8ft	0.25	143deg	0deg	0deg	

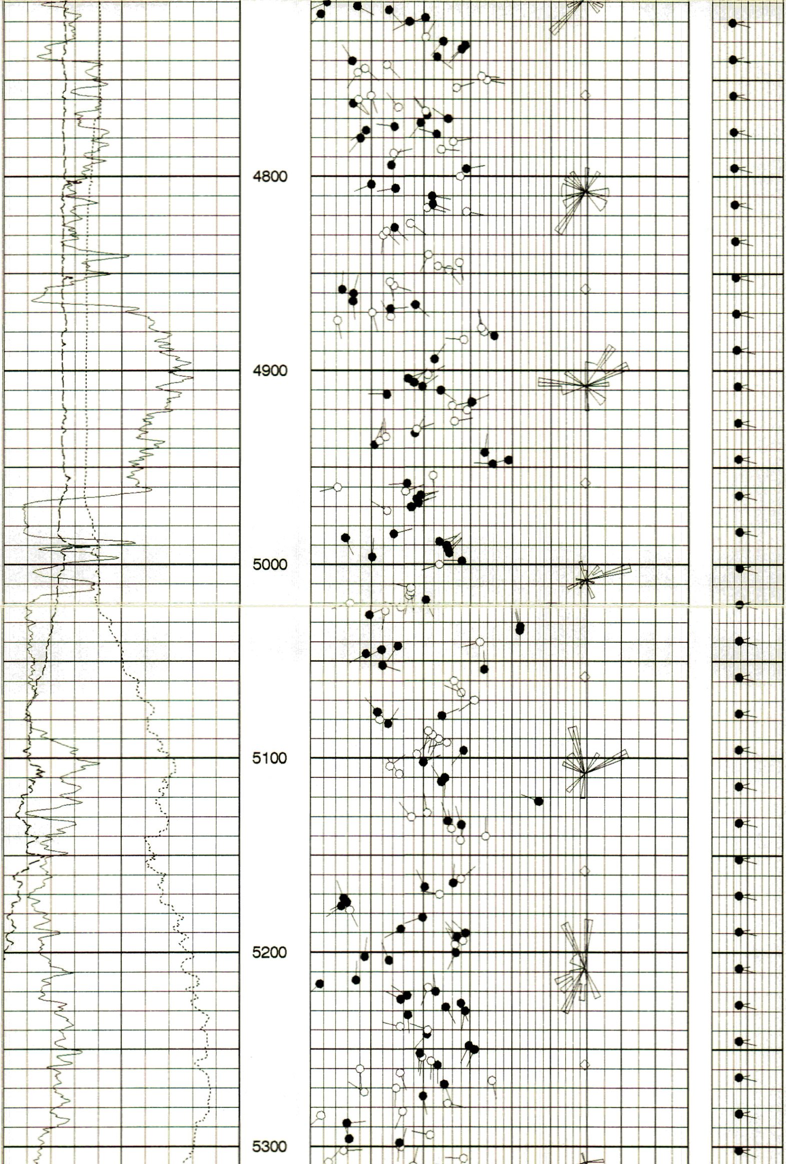
Gamma Ray

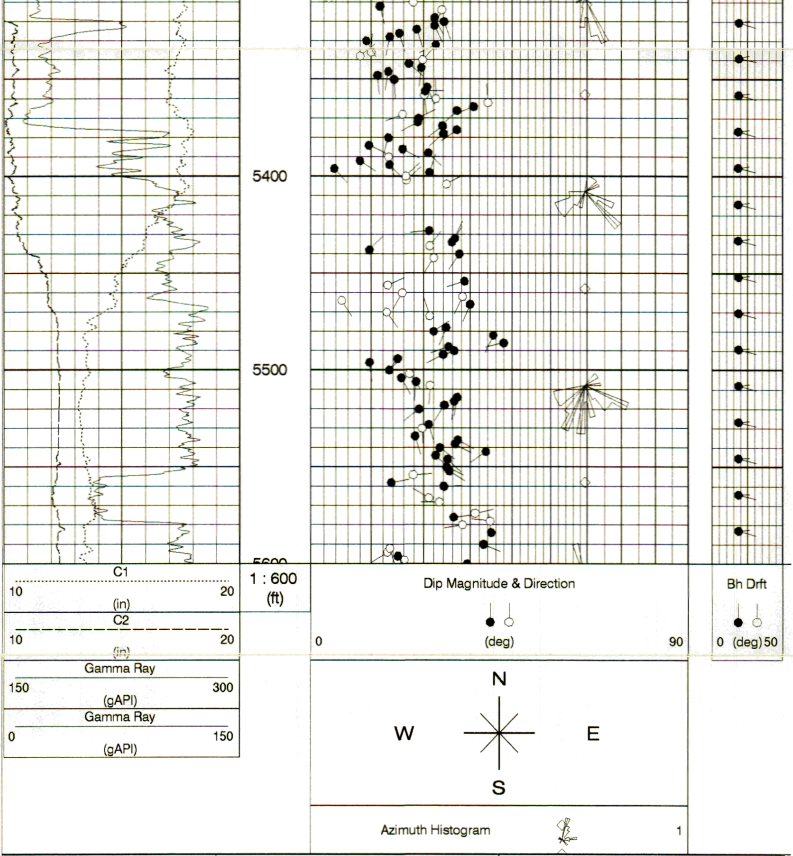
0 150

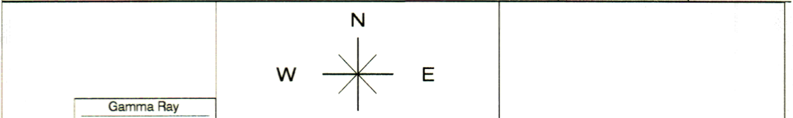
(gAPI)

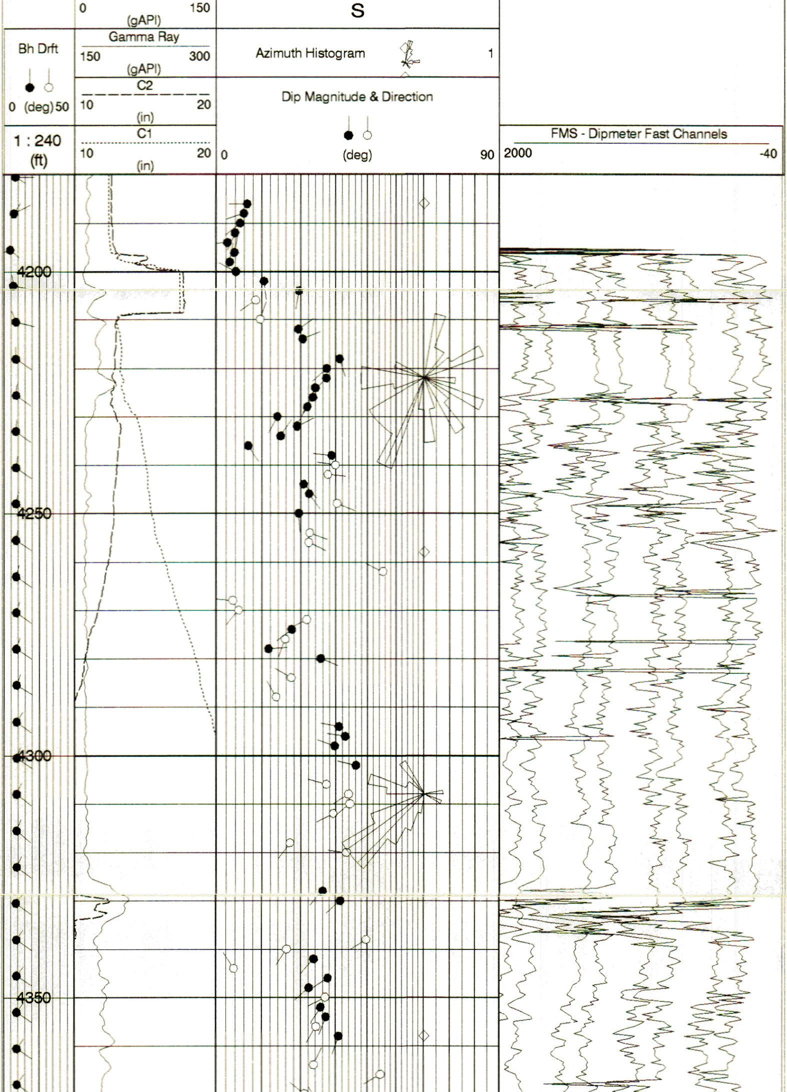


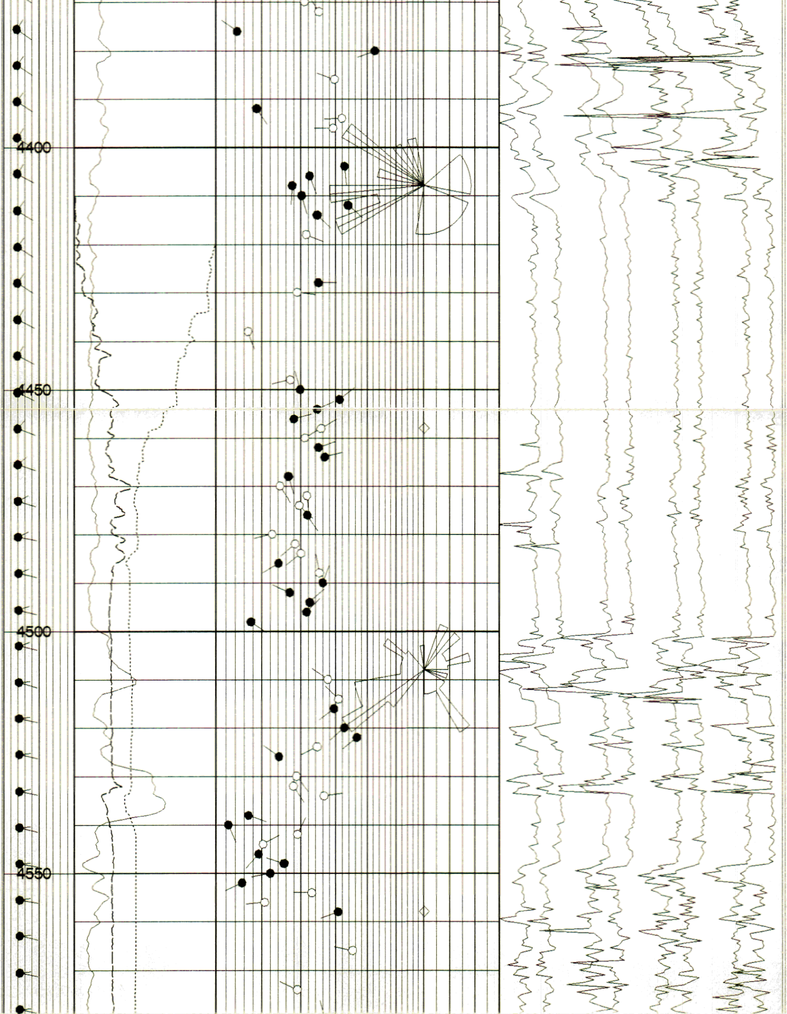


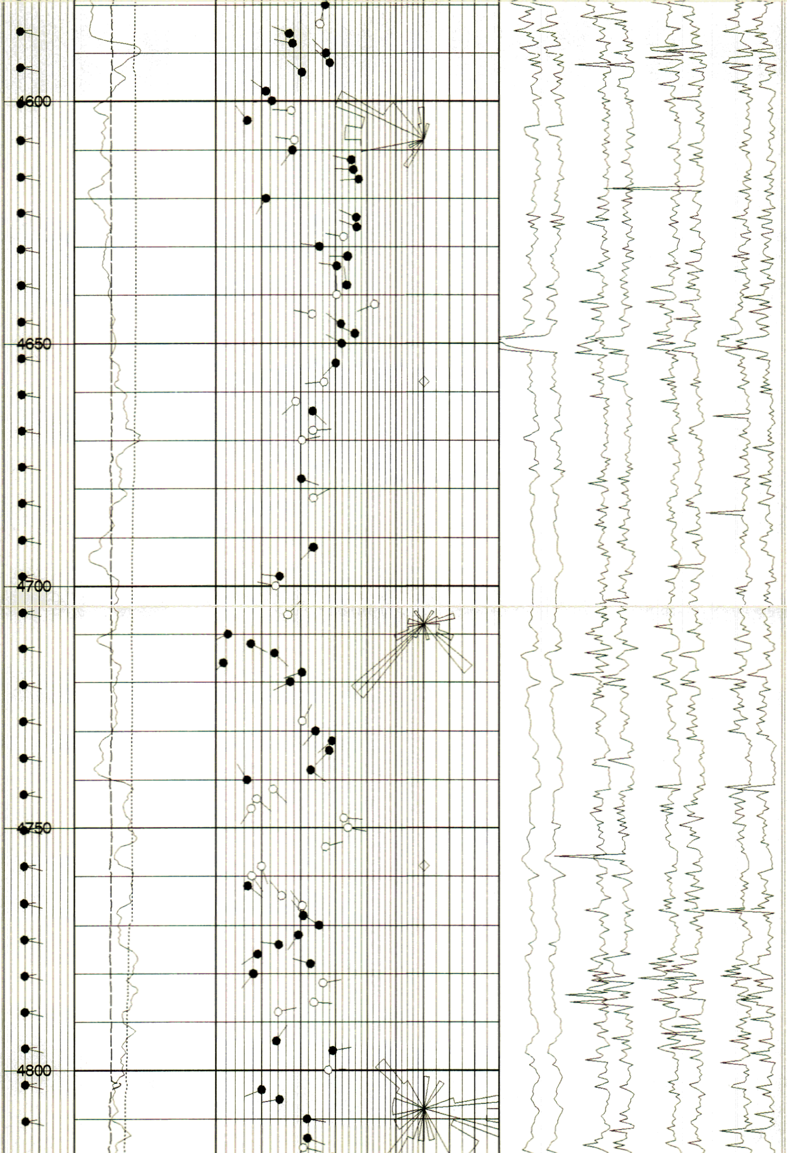


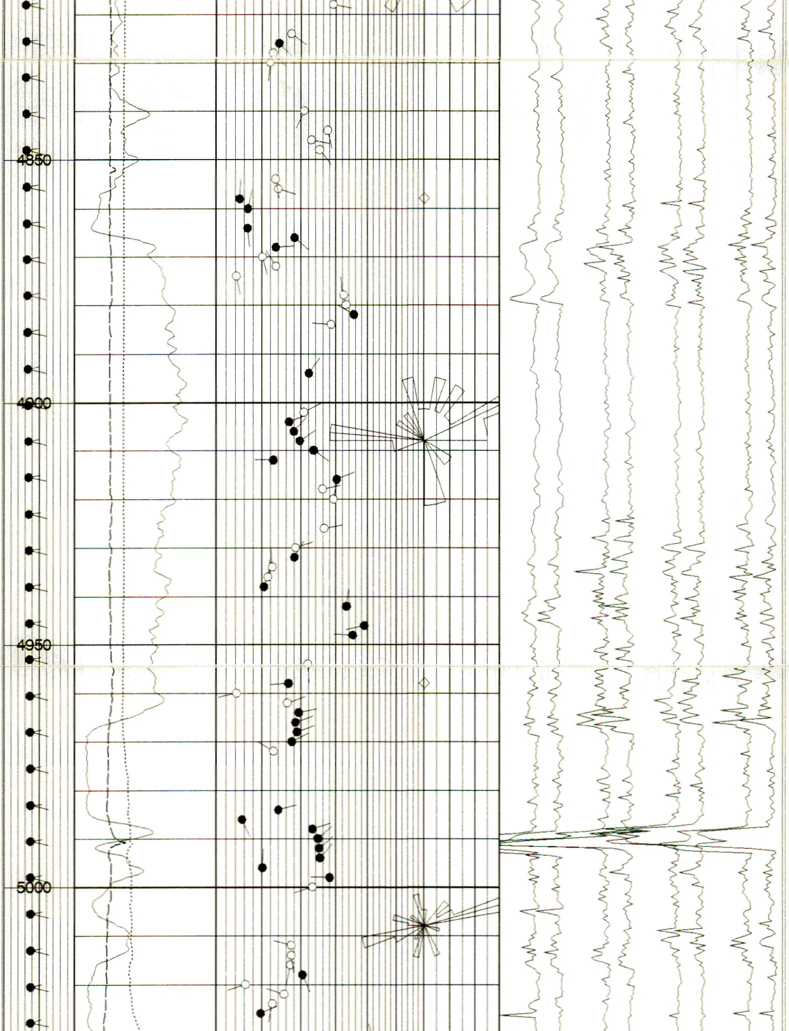


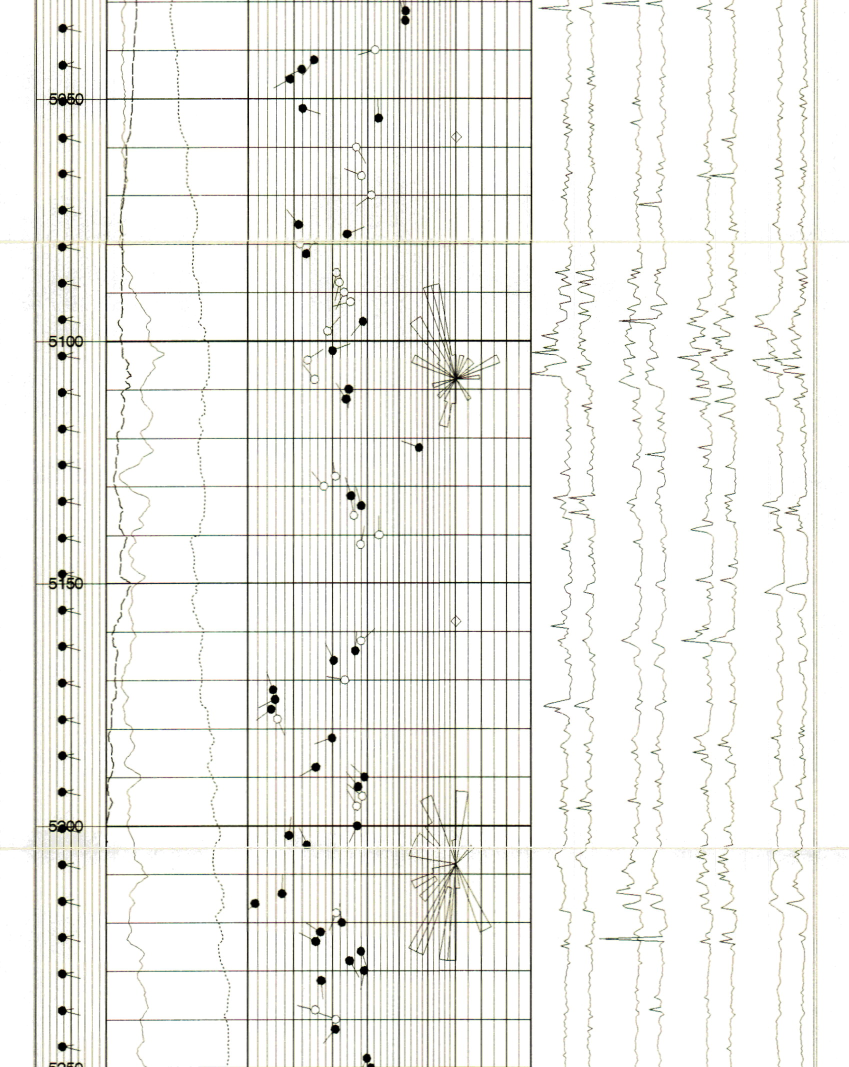


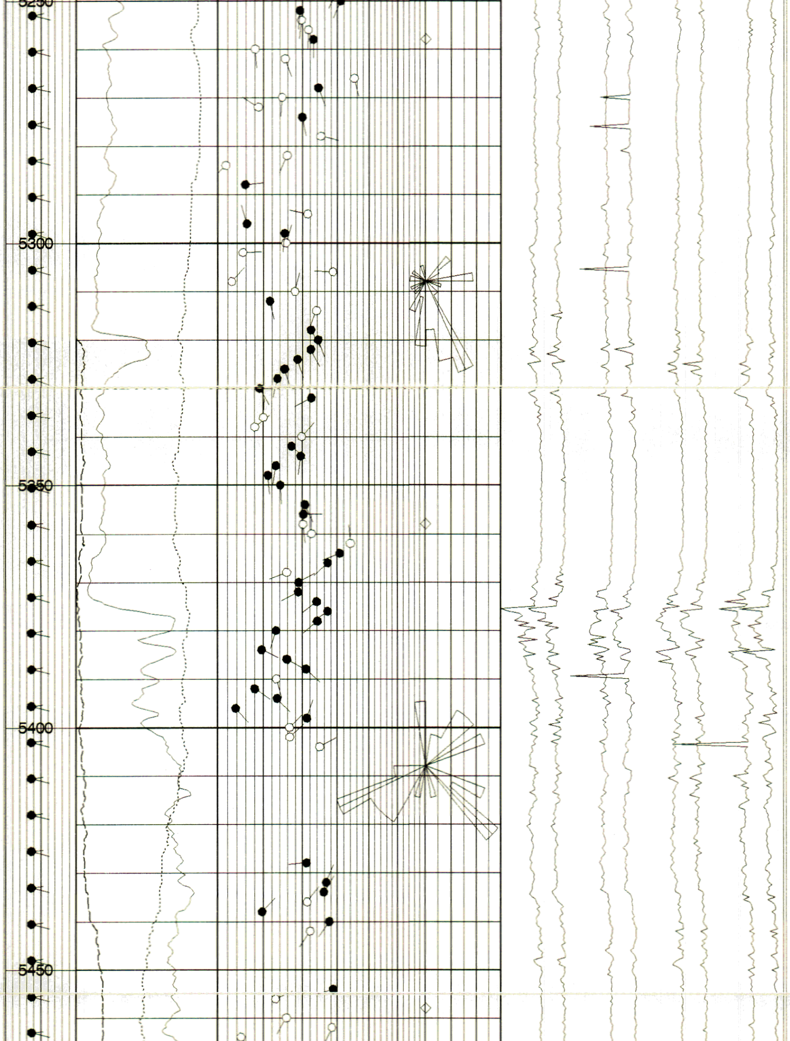


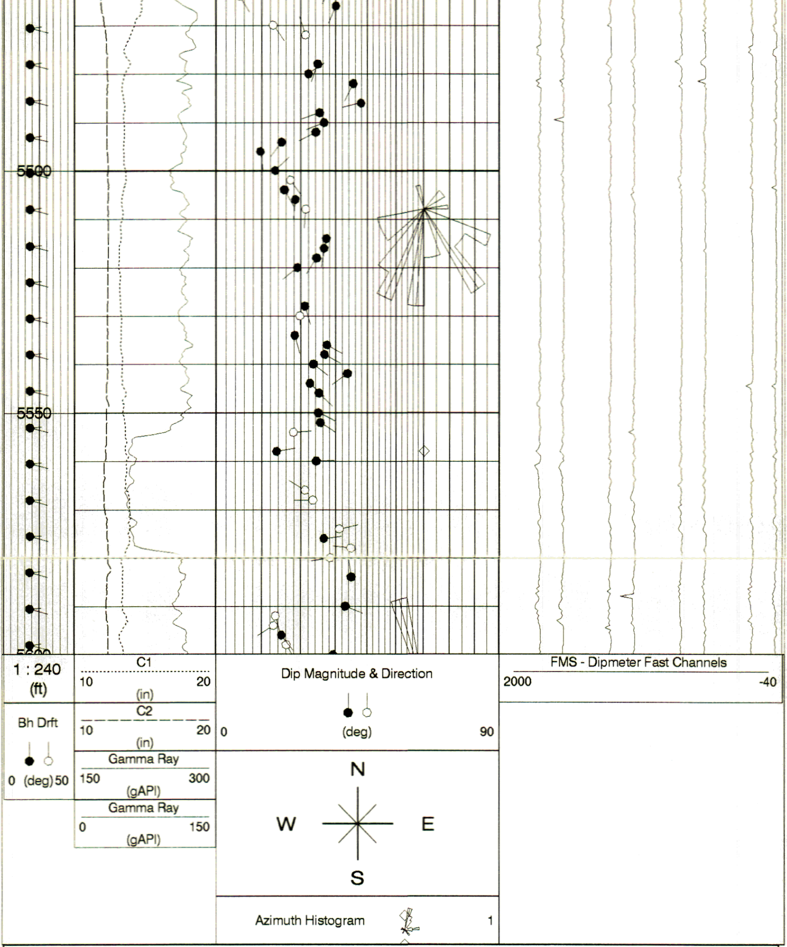












ListingofOutputs

Listing Data Discrimination Parameters

Discriminator 1: 4.000< QualityFactor > 25.000

Data was plotted when all discriminator channels were within the specified values.

Zones of Data that were outside the defined value ranges were plotted as a blank line.

Listing Data was not decimated.

Depth Feet	True Dip degree	Dip Azimuth degree	Borehole Deviation degree	Borehole Azimuth degree	Pad1 Azimuth degree	Caliper 1-3 inches	Caliper 2-4 inches	Quality Index
4186.0	6.66	269.24	7.82	90.74	59.10	12.41	12.58	20.00
4188.0	5.89	252.47	7.05	64.09	33.43	12.42	12.60	20.00
4190.0	5.05	231.86	6.24	37.15	347.14	12.42	12.63	16.00
4192.0	3.92	204.00	4.95	39.77	1.48	12.42	12.72	20.00
4194.0	2.28	265.89	3.53	346.15	286.01	12.49	12.72	20.00
4196.0	3.80	10.83	4.78	247.81	122.46	12.60	12.97	20.00
4198.0	2.76	10.59	3.62	201.24	92.01	13.61	14.55	20.00
4200.0	4.13	296.30	4.65	65.64	310.66	17.40	17.08	20.00
4202.0	10.45	173.12	6.87	66.60	278.03	17.44	17.70	20.00
4204.0	19.42	189.38	7.12	99.43	15.56	17.45	17.72	14.00
4206.0	8.54	235.41	7.77	106.76	331.65	17.46	17.74	7.00
4210.0	9.53	20.26	8.51	101.60	335.28	13.00	13.11	5.00
4212.0	19.23	56.65	8.68	113.67	342.19	13.11	12.95	11.00
4214.0	20.40	68.15	8.62	118.66	349.08	13.26	12.94	12.00
4218.0	31.12	161.57	8.55	123.80	359.52	13.32	12.87	10.00
4220.0	27.17	227.21	8.53	123.74	2.14	13.29	12.87	11.00
4222.0	27.08	224.64	8.59	122.57	0.25	13.41	12.68	16.00
4224.0	23.92	206.45	8.64	124.28	357.84	13.34	12.77	20.00
4226.0	23.25	213.88	8.66	125.99	6.62	13.55	12.67	19.00
4228.0	21.70	211.01	8.63	125.97	6.62	13.88	12.70	19.00
4230.0	13.81	209.41	8.56	125.52	5.36	14.36	12.96	15.00
4232.0	18.87	64.26	8.52	125.91	6.10	14.59	13.28	15.00
4234.0	14.64	34.86	8.53	126.35	5.91	14.73	13.19	11.00
4236.0	6.84	145.62	8.54	126.12	8.79	14.80	13.17	14.00
4238.0	28.68	275.61	8.58	125.38	8.06	14.96	13.08	13.00
4240.0	29.83	277.51	8.63	124.75	7.78	15.05	13.02	8.00
4242.0	27.47	95.13	8.64	124.52	7.34	15.17	12.97	8.00
4244.0	20.68	136.48	8.64	124.91	8.98	15.18	12.91	13.00
4246.0	22.19	144.54	8.63	125.93	11.39	15.29	12.79	11.00
4248.0	30.40	111.77	8.62	124.78	13.63	15.37	12.74	9.00
4250.0	19.28	175.90	8.59	123.61	9.91	15.47	12.77	12.00
4254.0	22.35	110.36	8.62	122.16	11.18	15.68	12.66	4.00
4256.0	22.09	115.83	8.63	122.55	10.39	15.89	12.58	7.00
4262.0	45.22	295.65	8.66	122.69	14.28	16.56	12.24	7.00
4268.0	3.41	273.55	8.74	122.95	17.30	17.19	11.81	4.00

4270.0	4.66	221.47	8.78	123.07	19.68	17.40	11.66	8.00
4272.0	21.54	243.85	8.81	124.24	22.06	17.64	11.51	9.00
4274.0	17.41	232.40	8.86	124.57	21.57	17.93	11.19	10.00
4276.0	15.76	200.32	8.89	123.48	21.27	18.15	11.00	9.00
4278.0	11.56	86.26	8.91	122.09	19.38	18.39	10.90	10.00
4280.0	25.44	112.06	8.94	123.26	24.65	18.56	10.76	12.00
4284.0	17.28	300.68	8.96	122.46	26.02	18.85	10.59	7.00
4286.0	13.44	328.65	9.02	121.07	25.68	19.13	10.11	6.00
4294.0	30.89	279.46	9.04	125.11	30.64	19.80	9.73	10.00
4296.0	32.83	277.37	9.05	124.47	34.03	20.02	9.54	15.00
4298.0	29.58	289.43	9.07	122.54	29.46	20.20	9.27	11.00
4302.0	36.18	282.25	9.10	123.64	18.77	20.18	8.94	11.00
4306.0	27.01	286.29	9.11	127.38	22.36	20.42	8.72	6.00
4308.0	33.89	238.44	9.12	128.00	23.69	20.44	8.73	7.00
4310.0	34.30	231.80	9.12	126.43	21.73	20.45	8.72	8.00
4312.0	29.06	242.62	9.11	125.36	19.81	20.47	8.72	6.00
4320.0	33.18	275.92	9.09	127.91	26.12	20.73	9.07	4.00
4328.0	25.89	220.03	9.15	126.73	41.18	20.91	9.52	12.00
4330.0	31.39	229.43	8.84	125.60	38.14	21.13	12.43	10.00
4338.0	39.64	238.76	9.13	123.62	37.45	21.14	9.92	5.00
4340.0	16.19	214.79	9.22	122.91	39.51	21.14	9.18	9.00
4342.0	23.48	221.16	9.21	122.53	39.08	21.14	9.24	11.00
4344.0	3.67	325.26	9.22	122.40	38.62	21.14	9.25	9.00
4346.0	27.53	237.12	9.21	122.59	37.62	21.14	9.32	14.00
4348.0	22.17	229.50	9.22	122.98	37.64	21.14	9.44	11.00
4350.0	26.75	243.54	9.27	123.19	38.07	21.12	9.47	8.00
4352.0	25.43	211.24	9.24	123.33	37.62	21.14	9.84	10.00
4354.0	26.93	201.56	9.25	123.40	37.85	21.14	9.78	12.00
4356.0	24.16	210.76	9.27	123.69	36.76	21.14	9.76	9.00
4358.0	30.81	199.32	9.29	123.62	37.69	21.14	9.40	12.00
4366.0	44.37	240.48	9.38	123.82	38.28	21.14	9.17	7.00
4370.0	20.93	307.44	9.44	123.89	35.18	21.14	8.91	9.00
4372.0	24.96	328.07	9.39	123.57	36.83	21.14	9.58	7.00
4376.0	4.42	305.72	9.40	123.00	35.10	21.14	9.61	14.00
4380.0	42.57	249.10	9.45	122.17	37.08	21.14	9.30	11.00
4386.0	29.57	288.42	9.53	121.92	36.20	21.14	9.39	8.00
4392.0	8.78	145.18	9.55	122.67	34.81	21.14	9.65	13.00
4394.0	31.95	268.12	9.58	121.68	33.27	20.93	9.43	7.00
4396.0	29.10	269.02	9.57	120.73	36.08	21.14	9.57	6.00

4404.0	32.72	173.65	9.63	118.67	33.21	21.14	9.85	14.00
4406.0	22.36	157.96	9.67	118.90	34.70	20.88	9.49	10.00
4408.0	17.58	183.64	9.64	119.67	32.47	20.81	9.85	11.00
4410.0	20.18	163.83	9.66	120.29	36.63	20.58	9.99	10.00
4412.0	33.77	129.37	9.71	120.84	35.65	20.36	10.04	10.00
4414.0	24.49	132.09	9.77	120.87	35.39	20.45	10.11	10.00
4418.0	21.39	111.37	9.80	121.89	34.94	20.51	10.22	9.00
4428.0	24.79	89.22	9.81	121.10	37.11	19.43	10.56	11.00
4430.0	18.92	96.07	9.85	119.96	35.57	19.38	10.66	7.00
4448.0	17.09	257.94	9.86	116.48	44.07	17.26	11.53	6.00
4450.0	19.71	344.04	9.89	115.52	40.16	17.19	11.83	15.00
4452.0	31.17	53.09	9.80	114.96	40.49	17.22	12.77	13.00
4454.0	24.40	66.38	9.83	114.71	41.06	16.59	12.63	12.00
4456.0	18.01	76.04	9.80	112.62	43.24	16.26	12.75	14.00
4458.0	25.51	59.18	9.87	109.99	41.88	15.91	12.52	4.00
4460.0	21.02	57.54	9.94	109.24	43.86	15.16	12.58	6.00
4462.0	24.80	71.81	10.05	109.64	47.19	14.89	12.30	11.00
4464.0	26.58	75.70	10.07	108.79	48.51	14.83	12.48	12.00
4468.0	16.65	163.78	10.15	106.39	51.46	14.46	12.47	11.00
4470.0	14.51	148.12	9.99	106.29	59.24	14.53	13.95	4.00
4472.0	21.61	173.11	10.13	106.60	65.52	14.28	12.97	8.00
4474.0	19.49	131.96	10.19	105.65	65.24	14.25	12.96	5.00
4476.0	21.70	146.94	10.15	104.08	65.89	14.47	13.54	12.00
4480.0	12.48	257.43	10.29	101.07	65.15	14.43	12.77	6.00
4482.0	18.36	230.08	10.28	100.83	64.21	14.49	13.13	7.00
4484.0	19.90	232.77	10.34	101.52	64.70	14.07	13.55	9.00
4486.0	14.13	240.62	10.45	102.53	66.04	13.66	12.97	11.00
4488.0	25.08	350.22	10.48	102.47	68.48	13.91	12.75	5.00
4490.0	26.01	21.03	10.53	102.32	67.42	13.91	12.60	14.00
4492.0	16.89	293.10	10.56	102.65	69.09	13.92	12.59	14.00
4494.0	22.39	47.76	10.61	103.56	70.09	13.92	12.50	16.00
4496.0	21.49	44.67	10.66	104.81	71.74	13.92	12.46	14.00
4498.0	7.47	125.39	10.71	104.18	68.90	13.83	12.49	16.00
4510.0	27.50	304.69	10.92	107.03	85.29	14.05	12.58	6.00
4514.0	30.82	312.43	10.98	104.19	82.67	14.03	12.57	9.00
4516.0	29.35	233.86	10.99	103.41	83.76	14.08	12.58	14.00
4520.0	32.59	229.22	11.00	102.34	83.19	14.11	12.68	11.00
4522.0	36.45	230.48	11.02	101.10	82.39	14.03	12.62	10.00
4524.0	24.43	244.88	11.04	101.28	83.22	14.02	12.68	9.00
4526.0	14.21	304.50	11.07	102.99	85.89	13.98	12.65	15.00
4530.0	18.73	140.95	11.12	102.25	88.91	14.00	12.69	8.00
4532.0	17.90	145.89	11.13	101.64	84.88	14.02	13.23	9.00
4534.0	26.38	82.18	11.24	102.01	78.45	13.60	11.92	7.00
4538.0	6.94	109.67	11.26	103.29	81.62	13.87	12.32	13.00
4540.0	2.48	155.02	11.25	104.25	84.99	14.14	12.47	13.00
4542.0	18.98	26.72	11.25	101.88	84.87	14.34	12.66	8.00
4544.0	10.28	61.14	11.28	99.93	82.25	14.35	12.69	7.00

4546.0	9.16	220.53	11.30	99.95	83.21	14.36	12.76	15.00
4548.0	15.50	287.69	11.32	99.43	85.45	14.35	12.77	14.00
4550.0	12.01	259.45	11.34	99.38	85.89	14.36	12.74	16.00
4552.0	5.51	245.84	11.35	99.40	84.88	14.36	12.65	16.00
4554.0	22.97	270.62	11.37	99.37	82.99	14.36	12.66	7.00
4556.0	10.65	264.15	11.40	99.18	82.62	14.36	12.63	6.00
4558.0	30.68	250.41	11.43	99.24	82.45	14.36	12.70	12.00
4566.0	35.13	280.87	11.48	103.33	88.65	14.34	12.68	9.00
4574.0	18.92	294.65	11.58	102.70	85.28	14.30	12.69	6.00
4580.0	26.69	343.93	11.69	103.30	87.58	14.29	12.61	11.00
4584.0	25.27	12.98	11.74	103.41	84.70	14.29	12.64	9.00
4586.0	16.83	291.98	11.77	101.46	82.65	14.26	12.67	11.00
4588.0	17.71	280.72	11.81	102.04	85.00	14.26	12.66	13.00
4590.0	26.97	315.22	11.85	101.51	85.24	14.22	12.74	11.00
4592.0	28.19	311.34	11.88	101.05	84.38	14.20	12.64	14.00
4594.0	20.20	308.34	11.88	100.60	82.40	14.29	12.67	12.00
4598.0	10.97	307.38	11.93	100.66	79.73	14.30	12.59	11.00
4600.0	12.49	265.75	11.95	99.97	79.72	14.31	12.60	11.00
4602.0	17.29	272.85	11.98	99.80	80.73	14.31	12.58	7.00
4604.0	6.71	319.23	12.01	99.75	79.49	14.31	12.58	13.00
4608.0	18.15	277.92	12.05	99.75	79.85	14.32	12.60	4.00
4610.0	17.70	217.24	12.08	100.11	80.68	14.31	12.60	12.00
4612.0	34.84	280.70	12.11	100.57	81.16	14.30	12.58	15.00
4614.0	35.42	272.92	12.12	101.47	84.05	14.31	12.57	14.00
4616.0	37.18	266.27	12.14	101.52	81.98	14.33	12.58	14.00
4620.0	11.00	211.67	12.18	101.66	81.09	14.34	12.57	13.00
4624.0	36.31	293.72	12.22	102.50	83.53	14.34	12.60	14.00
4626.0	36.54	290.22	12.24	101.63	81.17	14.35	12.61	14.00
4628.0	32.41	278.96	12.27	101.64	81.76	14.36	12.60	9.00
4630.0	25.08	277.38	12.29	101.29	81.91	14.36	12.60	13.00
4632.0	33.62	269.71	12.32	101.00	81.66	14.36	12.61	14.00
4634.0	30.30	278.76	12.35	100.60	81.28	14.35	12.60	10.00
4638.0	33.33	352.06	12.40	100.53	81.51	14.36	12.61	10.00
4640.0	30.32	357.35	12.43	100.84	82.31	14.36	12.60	8.00
4642.0	42.44	248.52	12.46	100.42	81.58	14.36	12.60	6.00
4644.0	23.08	281.19	12.48	100.80	82.83	14.36	12.61	7.00
4646.0	31.61	303.13	12.51	100.57	82.43	14.36	12.60	13.00
4648.0	35.85	294.87	12.55	101.21	82.19	14.32	12.60	13.00
4650.0	31.88	297.46	12.57	100.49	81.75	14.31	12.62	16.00
4654.0	29.97	225.73	12.65	100.28	81.80	14.30	12.63	13.00
4658.0	26.35	264.22	12.71	100.71	82.09	14.30	12.60	8.00
4662.0	18.56	225.94	12.77	100.42	81.99	14.30	12.60	8.00
4664.0	23.19	134.09	12.80	100.69	83.25	14.29	12.64	11.00
4670.0	20.24	78.30	12.91	100.38	83.20	14.26	12.62	7.00
4678.0	20.06	110.62	13.06	100.49	81.14	14.20	12.60	11.00
4682.0	23.42	60.63	13.13	100.65	79.95	14.15	12.61	6.00

4692.0	23.36	224.76	13.30	101.03	80.20	14.11	12.64	13.00
4698.0	14.41	275.11	13.41	100.69	79.84	14.09	12.58	13.00
4700.0	13.36	281.50	13.44	101.05	79.55	14.09	12.60	8.00
4706.0	16.47	43.06	13.54	101.56	79.80	14.08	12.59	4.00
4710.0	2.43	245.97	13.62	101.64	81.24	14.06	12.61	18.00
4712.0	7.45	118.18	13.67	100.83	82.15	14.05	12.57	13.00
4714.0	13.12	134.93	13.69	101.05	81.76	14.08	12.60	13.00
4716.0	1.48	224.38	13.72	101.15	82.14	14.07	12.58	15.00
4718.0	20.24	251.23	13.74	101.31	81.74	14.07	12.60	12.00
4720.0	17.05	243.03	13.76	101.98	81.56	14.07	12.60	10.00
4728.0	20.33	31.76	13.89	101.27	80.20	14.07	12.60	5.00
4730.0	23.96	220.52	13.93	100.74	79.79	14.07	12.64	14.00
4732.0	28.81	228.54	13.96	101.18	81.91	14.05	12.59	11.00
4734.0	27.99	223.51	14.01	100.71	81.33	14.05	12.59	14.00
4738.0	22.72	128.33	14.08	100.28	80.88	14.04	12.50	10.00
4740.0	6.62	327.54	14.11	100.20	79.57	14.04	12.51	14.00
4742.0	12.75	134.90	14.13	100.06	78.20	14.05	12.56	9.00
4744.0	8.79	130.24	14.16	99.83	78.26	14.05	12.58	9.00
4746.0	7.52	212.76	14.18	99.58	78.16	14.05	12.57	7.00
4748.0	32.49	93.49	14.22	99.64	76.85	14.05	12.60	6.00
4750.0	33.71	100.58	14.24	101.21	78.37	14.07	12.60	6.00
4754.0	26.84	74.67	14.32	102.96	81.69	14.09	12.60	8.00
4758.0	9.87	160.51	14.42	102.25	83.40	14.08	12.52	7.00
4760.0	7.68	143.97	14.47	102.08	82.45	14.08	12.57	7.00
4762.0	6.76	127.32	14.50	102.22	82.73	14.09	12.58	10.00
4764.0	14.94	319.16	14.53	102.83	83.08	14.09	12.57	9.00
4766.0	20.30	319.94	14.55	104.89	87.23	14.09	12.61	8.00
4768.0	20.58	321.23	14.58	104.08	86.10	14.08	12.58	10.00
4770.0	24.98	302.88	14.65	101.47	81.25	13.88	12.55	13.00
4772.0	19.28	216.12	14.68	101.81	82.43	13.83	12.54	12.00
4774.0	14.18	277.12	14.73	101.99	82.32	13.83	12.52	15.00
4776.0	8.97	236.94	14.76	102.26	82.86	13.83	12.50	11.00
4778.0	22.58	286.11	14.80	102.22	82.65	13.81	12.55	12.00
4780.0	8.03	218.71	14.84	102.40	82.43	13.79	12.55	13.00
4782.0	26.10	80.88	14.88	102.94	82.34	13.79	12.55	8.00
4786.0	23.52	94.32	14.96	103.05	83.12	13.76	12.58	9.00
4788.0	14.05	77.05	15.00	102.28	82.84	13.74	12.55	7.00
4794.0	13.55	34.08	15.13	102.70	83.12	13.74	12.58	11.00
4796.0	29.03	80.66	15.18	102.35	83.94	13.74	12.60	11.00
4800.0	27.63	87.75	15.26	102.43	85.12	13.70	12.58	9.00
4804.0	9.94	247.95	15.31	102.62	82.31	13.71	12.70	14.00
4806.0	14.38	260.52	15.37	102.46	82.63	13.63	12.53	12.00
4810.0	21.65	99.19	15.45	102.55	81.13	13.63	12.53	13.00
4814.0	21.76	110.87	15.53	102.35	82.21	13.58	12.58	12.00

4816.0	20.59	102.21	15.58	102.80	84.08	13.55	12.43	8.00
4818.0	29.06	101.70	15.62	102.52	81.87	13.57	12.49	9.00
4824.0	17.25	125.30	15.73	103.20	83.57	13.55	12.56	8.00
4826.0	14.19	134.14	15.77	103.36	83.67	13.55	12.57	11.00
4828.0	12.63	134.72	15.82	103.24	83.31	13.54	12.54	6.00
4830.0	12.01	185.20	15.85	103.25	82.80	13.55	12.54	9.00
4840.0	20.83	205.20	16.05	103.51	82.13	13.52	12.51	8.00
4844.0	27.44	166.82	16.14	103.34	81.80	13.50	12.49	8.00
4848.0	25.09	141.54	16.21	103.24	81.99	13.50	12.52	8.00
4856.0	14.02	107.66	16.38	103.50	83.33	13.50	12.54	8.00
4858.0	4.97	2.96	16.42	103.49	84.52	13.50	12.50	13.00
4860.0	6.79	14.35	16.44	103.31	84.72	13.52	12.49	12.00
4864.0	6.71	173.91	16.52	103.57	82.03	13.50	12.49	13.00
4866.0	18.20	130.34	16.54	103.43	80.93	13.50	12.47	11.00
4868.0	13.37	86.64	16.56	102.37	79.48	13.52	12.55	11.00
4870.0	10.09	164.28	16.59	103.78	79.99	13.52	12.58	9.00
4872.0	13.43	327.11	16.62	101.73	81.59	13.51	12.61	6.00
4874.0	4.21	168.39	16.66	102.81	79.14	13.52	12.64	6.00
4878.0	32.44	349.43	16.74	102.45	79.58	13.52	12.63	6.00
4880.0	33.04	344.73	16.79	101.79	78.60	13.52	12.58	6.00
4882.0	35.47	300.85	16.84	101.48	78.87	13.50	12.47	14.00
4884.0	28.45	272.96	16.89	101.26	78.18	13.50	12.48	8.00
4894.0	22.10	35.81	17.11	101.94	79.18	13.49	12.49	15.00
4902.0	20.73	63.89	17.31	101.90	79.73	13.48	12.52	8.00
4904.0	16.80	69.17	17.38	101.78	79.30	13.48	12.51	12.00
4906.0	17.97	43.18	17.42	102.02	78.77	13.48	12.53	11.00
4908.0	19.59	56.78	17.46	102.02	79.42	13.49	12.54	13.00
4910.0	23.40	125.84	17.50	101.95	79.14	13.49	12.54	12.00
4912.0	12.71	270.00	17.54	101.85	80.00	13.49	12.53	14.00
4916.0	30.26	68.78	17.62	101.90	79.38	13.49	12.50	11.00
4918.0	25.88	79.01	17.65	102.10	80.09	13.48	12.53	9.00
4920.0	29.21	11.98	17.71	102.07	80.96	13.50	12.61	8.00
4926.0	26.39	80.65	17.82	102.12	79.91	13.52	12.54	6.00
4930.0	18.43	72.57	17.88	102.50	80.64	13.52	12.58	8.00
4932.0	18.12	31.42	17.91	102.47	79.13	13.52	12.54	12.00
4934.0	12.52	355.53	17.95	102.22	80.44	13.51	12.47	6.00
4938.0	10.46	21.55	18.01	102.01	77.36	13.50	12.47	10.00
4942.0	33.19	7.57	18.08	102.07	77.33	13.48	12.50	11.00
4946.0	38.88	257.29	18.19	102.69	78.61	13.47	12.56	15.00
4948.0	35.10	271.77	18.21	101.98	77.75	13.48	12.56	16.00

4954.0	21.80	176.02	18.29	102.38	77.85	13.48	12.62	6.00
4958.0	16.62	266.20	18.37	102.25	76.88	13.44	12.64	16.00
4960.0	4.22	257.64	18.45	102.45	77.53	13.44	12.64	9.00
4962.0	16.32	71.07	18.50	102.55	79.39	13.42	12.62	5.00
4964.0	19.25	78.36	18.57	102.37	80.23	13.42	12.54	16.00
4966.0	18.42	70.80	18.62	102.32	80.47	13.45	12.47	16.00
4968.0	18.81	70.70	18.66	102.22	80.03	13.47	12.42	16.00
4970.0	17.43	65.59	18.70	102.13	79.52	13.50	12.39	16.00
4972.0	12.77	300.12	18.73	102.12	78.86	13.59	12.34	8.00
4984.0	14.06	76.57	18.92	103.38	84.89	13.78	12.28	11.00
4986.0	5.48	154.88	18.93	102.64	79.95	13.85	12.44	12.00
4988.0	23.15	73.14	18.91	102.49	77.33	13.96	12.58	10.00
4990.0	24.66	48.20	18.90	102.52	82.16	13.96	12.93	13.00
4992.0	24.93	50.88	18.96	102.20	78.53	13.79	12.50	13.00
4994.0	25.22	41.14	18.98	102.91	78.72	13.75	12.46	13.00
4996.0	10.07	3.66	18.95	102.95	78.66	13.93	12.58	12.00
4998.0	28.03	271.07	18.94	103.50	79.86	14.02	12.57	13.00
5000.0	23.13	252.99	18.96	103.58	81.13	14.02	12.57	6.00
5012.0	17.28	283.53	19.02	102.85	78.66	14.02	12.25	5.00
5016.0	17.01	190.90	19.04	103.33	78.23	13.91	12.30	8.00
5018.0	20.32	155.38	19.06	102.26	76.31	13.86	12.23	12.00
5020.0	6.25	253.42	19.03	102.74	77.12	13.92	12.28	5.00
5022.0	15.47	287.36	19.04	101.63	75.73	14.00	12.22	8.00
5024.0	12.52	191.81	19.04	101.93	74.79	14.05	12.23	7.00
5026.0	9.64	66.51	19.02	101.67	74.19	14.14	12.15	12.00
5032.0	42.01	346.49	18.96	102.71	74.14	14.48	12.10	11.00
5034.0	41.85	346.03	18.97	101.02	72.08	14.54	12.05	10.00
5040.0	32.18	254.76	18.89	101.71	72.49	14.94	11.90	7.00
5042.0	14.93	216.43	18.87	101.26	72.47	14.89	11.88	12.00
5044.0	11.84	244.73	18.83	102.27	76.23	15.03	11.83	12.00
5046.0	9.02	242.43	18.84	102.82	75.40	15.03	11.83	20.00
5052.0	12.05	106.55	18.86	101.40	74.87	15.09	11.78	12.00
5054.0	33.20	358.43	18.89	100.63	72.46	15.13	11.71	11.00
5060.0	26.41	148.38	18.83	101.89	74.16	15.75	11.39	7.00
5066.0	27.98	292.36	18.85	102.74	77.06	15.74	11.35	8.00
5076.0	11.09	318.89	18.80	99.13	73.28	16.37	10.98	10.00
5078.0	23.77	68.41	18.82	102.53	76.32	16.18	11.13	14.00
5080.0	11.45	87.19	18.85	101.97	74.57	16.12	11.16	7.00
5082.0	13.06	35.22	18.86	101.21	73.69	16.13	11.16	12.00
5086.0	20.93	193.11	18.89	100.66	73.49	16.14	11.19	8.00
5088.0	21.79	193.34	18.84	100.85	74.36	16.48	11.09	8.00
5090.0	23.07	205.47	18.82	101.59	75.69	16.56	11.10	9.00
5092.0	24.84	256.54	18.78	102.28	77.07	16.68	11.12	7.00
5096.0	28.53	221.01	18.84	101.46	75.44	16.52	10.87	13.00
5098.0	18.56	42.64	18.80	98.79	71.59	17.03	11.16	9.00
5102.0	19.89	69.58	18.79	98.99	72.13	17.19	11.17	11.00
5104.0	13.38	55.18	18.73	99.73	72.75	17.29	11.46	4.00

5108.0	15.18	321.47	18.70	101.17	76.33	17.12	11.39	6.00
5110.0	24.41	181.16	18.77	101.37	75.43	16.85	11.37	15.00
5112.0	23.67	327.22	18.84	101.04	72.79	16.74	11.33	13.00
5122.0	46.75	291.01	18.96	102.60	77.10	16.53	10.80	10.00
5128.0	20.71	349.90	19.00	102.56	77.03	16.77	10.56	8.00
5130.0	17.53	320.11	18.97	103.14	78.57	16.91	10.64	6.00
5132.0	25.01	342.34	18.95	103.23	78.72	16.99	10.90	14.00
5134.0	28.01	342.78	18.92	102.60	80.33	16.95	11.00	12.00
5136.0	25.81	349.77	18.91	101.60	78.64	16.91	11.06	8.00
5140.0	33.56	359.00	18.93	101.93	80.93	16.59	11.29	9.00
5142.0	27.79	12.94	19.01	102.83	81.14	16.02	11.32	8.00
5162.0	27.96	49.89	18.89	102.80	82.51	16.70	10.47	8.00
5164.0	26.20	4.18	18.92	104.04	82.39	16.69	10.80	11.00
5166.0	20.21	332.93	18.91	103.39	83.13	16.58	10.70	12.00
5170.0	23.29	280.02	18.89	103.45	82.80	16.74	10.62	8.00
5172.0	5.30	339.29	18.88	102.31	81.96	16.63	10.73	10.00
5174.0	5.76	245.36	18.89	101.88	80.47	16.65	10.53	12.00
5176.0	4.87	233.94	18.82	102.21	81.98	17.11	10.45	12.00
5178.0	6.27	155.52	18.82	102.39	82.59	17.18	10.39	7.00
5182.0	19.76	250.95	18.82	102.56	82.07	17.61	10.17	10.00
5188.0	15.47	241.73	18.87	101.05	80.70	17.20	10.48	11.00
5190.0	28.97	311.67	18.83	100.77	80.26	17.52	10.29	15.00
5192.0	27.03	321.37	18.83	101.17	79.95	17.82	10.12	10.00
5194.0	28.33	308.62	18.87	101.44	80.31	17.61	10.22	5.00
5196.0	26.62	329.91	18.90	101.67	80.12	17.51	10.33	9.00
5200.0	26.81	206.81	18.82	103.17	82.26	17.88	10.02	10.00
5202.0	8.84	6.67	18.81	101.75	80.59	18.07	9.95	15.00
5204.0	13.24	335.31	18.85	102.50	80.81	17.71	9.94	10.00
5214.0	7.31	2.18	18.82	102.10	81.38	18.30	9.84	13.00
5216.0	1.43	227.80	18.89	104.09	82.65	18.22	9.65	16.00
5218.0	20.89	202.09	18.91	103.69	83.21	18.00	9.76	9.00
5220.0	22.48	353.61	18.91	103.03	82.31	17.90	9.69	15.00
5222.0	16.69	301.44	18.92	102.14	80.49	18.15	9.51	14.00
5224.0	15.48	297.21	18.89	101.67	79.85	18.14	9.60	14.00
5226.0	27.92	157.74	18.92	102.58	81.85	17.96	9.66	12.00
5228.0	24.63	150.31	18.92	102.68	82.66	18.09	9.47	14.00
5230.0	28.87	190.21	18.90	104.24	83.46	18.33	9.39	13.00
5232.0	16.83	174.95	18.87	104.55	83.80	18.58	9.25	15.00
5238.0	15.39	282.62	18.95	103.87	82.28	18.55	9.21	8.00
5240.0	20.80	290.49	18.96	103.71	81.95	18.46	9.31	8.00
5242.0	20.63	220.68	18.94	103.74	81.81	18.63	9.26	17.00
5248.0	29.75	205.97	18.93	103.15	80.61	18.66	9.22	12.00
5250.0	30.97	203.58	18.87	103.09	81.45	18.58	9.39	13.00
5252.0	19.18	184.42	18.87	103.33	80.82	18.58	9.39	11.00
5254.0	19.59	185.75	18.89	102.98	79.51	18.59	9.39	9.00
5256.0	21.51	181.70	18.93	102.77	80.01	18.17	9.66	9.00
5258.0	22.92	180.25	18.99	102.44	80.00	18.14	9.50	11.00
5260.0	8.01	175.85	18.97	102.71	80.34	18.33	9.46	5.00

5262.0	15.36	159.98	18.94	102.18	79.73	18.51	9.31	8.00
5266.0	35.11	166.78	18.94	101.68	78.74	18.70	9.09	9.00
5268.0	24.31	159.31	19.00	101.86	78.01	18.72	8.87	12.00
5270.0	14.57	183.07	18.97	102.32	78.96	18.76	9.03	6.00
5272.0	8.76	302.11	18.95	102.36	78.40	18.77	9.15	6.00
5274.0	19.84	168.26	18.93	102.41	77.77	18.74	9.22	13.00
5278.0	24.98	101.97	18.95	102.68	77.44	18.68	9.31	6.00
5282.0	15.85	204.73	18.87	103.02	78.45	18.70	9.39	5.00
5284.0	1.58	227.02	18.86	103.21	78.86	18.52	9.48	9.00
5288.0	5.80	84.86	18.87	103.51	79.17	18.15	9.76	10.00
5294.0	21.30	280.84	18.88	106.02	81.51	18.11	9.61	7.00
5296.0	6.18	341.96	18.90	106.63	81.98	18.08	9.44	12.00
5298.0	15.23	185.17	18.88	106.56	82.02	18.08	9.33	14.00
5300.0	15.47	18.23	18.94	109.00	82.79	18.06	9.19	4.00
5302.0	5.26	87.42	18.82	110.41	87.90	18.02	9.31	6.00
5306.0	28.51	272.60	18.95	104.05	76.26	17.82	9.52	8.00
5308.0	2.80	44.01	18.94	100.87	74.57	17.64	9.60	9.00
5310.0	17.85	13.75	18.81	99.24	76.62	17.62	9.70	4.00
5312.0	11.50	166.41	18.96	108.28	79.71	17.66	9.77	10.00
5314.0	23.74	202.46	18.78	106.31	83.27	17.74	10.03	9.00
5318.0	22.23	152.16	18.90	107.02	80.35	17.45	9.75	14.00
5320.0	24.20	159.69	18.87	106.79	80.98	17.20	10.08	14.00
5322.0	22.19	153.30	18.79	106.67	81.24	17.52	10.53	14.00
5324.0	18.51	161.96	18.78	106.84	82.53	17.40	10.50	14.00
5326.0	15.19	163.73	18.78	108.64	84.43	17.38	10.51	13.00
5328.0	13.36	192.06	18.76	109.22	84.59	17.55	10.45	12.00
5330.0	9.08	148.16	18.70	110.54	87.19	17.71	10.39	14.00
5332.0	22.46	243.85	18.73	96.07	71.94	17.66	10.48	16.00
5338.0	7.99	51.88	18.80	101.33	76.53	17.35	10.45	5.00
5340.0	19.76	42.19	18.79	102.28	77.56	17.33	10.41	8.00
5342.0	17.00	131.63	18.81	104.08	78.16	17.27	10.41	12.00
5344.0	19.47	187.22	18.79	105.03	81.24	17.02	10.53	12.00
5346.0	13.04	189.58	18.81	105.76	80.85	16.89	10.55	15.00
5348.0	11.07	174.60	18.76	104.30	80.36	17.20	10.38	13.00
5350.0	14.17	176.38	18.73	105.42	82.22	17.15	10.41	10.00
5354.0	20.63	155.13	18.75	103.52	79.12	17.04	10.45	11.00
5356.0	20.23	89.61	18.75	104.33	80.96	17.00	10.45	13.00
5358.0	20.09	172.43	18.69	104.73	83.07	17.14	10.35	4.00
5360.0	22.49	359.04	18.72	105.33	83.27	16.96	10.48	9.00
5362.0	34.05	356.41	18.73	106.53	83.64	16.94	10.49	6.00
5364.0	30.74	248.43	18.68	107.17	85.17	17.21	10.30	10.00
5366.0	27.00	226.23	18.57	106.67	88.20	17.39	10.26	10.00
5368.0	15.78	249.64	18.66	105.51	82.92	17.32	10.34	6.00

5370.0	18.90	62.82	18.56	104.99	83.12	17.51	10.24	11.00
5372.0	18.74	242.28	18.51	104.71	82.61	17.81	10.13	13.00
5374.0	23.89	232.98	18.49	104.71	82.71	17.78	10.12	20.00
5376.0	26.98	234.32	18.41	105.99	84.91	17.97	10.14	20.00
5378.0	24.07	229.54	18.39	101.86	79.99	17.97	10.21	20.00
5380.0	13.07	197.02	18.39	100.93	79.14	17.85	10.30	13.00
5384.0	9.54	114.48	18.45	104.71	82.98	17.59	10.31	10.00
5386.0	15.82	119.03	18.41	102.04	80.75	17.73	10.32	12.00
5388.0	20.89	133.16	18.38	102.56	82.58	17.75	10.21	12.00
5390.0	13.10	161.84	18.40	102.97	83.18	17.54	10.35	6.00
5392.0	7.97	122.81	18.35	103.40	84.05	17.58	10.43	15.00
5394.0	13.33	135.27	18.34	103.74	83.52	17.70	10.40	11.00
5396.0	3.72	136.44	18.39	104.09	84.32	17.33	10.50	12.00
5398.0	21.13	19.94	18.40	104.41	84.25	17.40	10.46	12.00
5400.0	16.49	45.68	18.40	104.41	84.10	17.56	10.26	8.00
5402.0	16.60	47.09	18.41	104.39	83.44	17.52	10.32	4.00
5404.0	24.75	62.26	18.36	104.30	82.91	17.71	10.46	7.00
5428.0	21.06	264.53	18.41	104.07	84.34	16.05	10.61	10.00
5432.0	26.54	23.81	18.38	104.13	85.25	16.04	10.69	10.00
5434.0	25.90	32.86	18.43	104.27	83.65	15.91	10.75	12.00
5436.0	21.19	38.46	18.39	104.23	84.67	15.95	10.84	9.00
5438.0	9.64	44.51	18.39	104.32	85.84	15.94	10.97	19.00
5440.0	27.52	215.19	18.47	104.28	84.14	15.66	11.06	15.00
5442.0	22.06	214.02	18.51	104.23	84.34	15.43	11.51	9.00
5454.0	28.69	252.15	18.63	104.36	86.21	14.77	11.85	11.00
5460.0	15.73	211.00	18.63	104.45	86.31	14.61	11.91	9.00
5462.0	28.23	205.94	18.61	104.25	86.82	14.66	11.88	6.00
5464.0	4.90	146.87	18.58	104.35	84.68	14.81	11.87	7.00
5466.0	29.98	204.05	18.57	104.40	84.57	14.76	11.87	12.00
5470.0	12.76	143.06	18.58	104.41	85.06	14.26	12.10	6.00
5472.0	21.19	341.75	18.62	104.47	84.56	13.95	12.21	5.00
5478.0	24.60	200.60	18.54	104.55	85.38	13.93	12.29	12.00
5480.0	22.03	55.87	18.61	104.82	85.50	13.59	12.32	12.00
5482.0	35.32	205.79	18.67	104.65	84.96	13.41	12.34	15.00
5486.0	37.84	257.69	18.63	104.14	85.30	13.54	12.29	16.00
5488.0	25.14	251.16	18.64	104.05	83.79	13.51	12.29	16.00
5490.0	26.38	248.32	18.64	104.00	85.81	13.53	12.29	14.00
5492.0	24.00	242.61	18.64	103.63	86.08	13.55	12.29	15.00
5494.0	14.84	217.04	18.64	103.87	85.04	13.52	12.29	19.00
5496.0	9.65	172.82	18.62	104.31	85.38	13.50	12.31	13.00
5500.0	13.26	46.04	18.50	103.64	84.91	13.62	12.38	11.00
5502.0	17.13	143.24	18.48	103.50	84.45	13.67	12.36	7.00
5504.0	15.54	149.69	18.52	103.73	86.21	13.50	12.40	10.00
5506.0	18.38	185.24	18.54	103.90	85.89	13.36	12.38	15.00
5508.0	21.25	183.98	18.50	103.97	85.14	13.42	12.35	7.00
5514.0	27.01	189.87	18.53	104.22	87.77	13.33	12.38	12.00
5516.0	26.38	187.18	18.56	104.37	86.88	13.20	12.38	14.00

5518.0	24.27	212.37	18.56	104.47	86.72	13.19	12.38	11.00
5520.0	18.96	230.26	18.58	104.46	87.24	13.16	12.36	14.00
5528.0	20.98	162.76	18.59	104.42	86.93	13.27	12.33	13.00
5530.0	19.61	176.24	18.58	104.50	86.89	13.32	12.33	5.00
5534.0	18.22	163.61	18.59	104.53	87.83	13.31	12.33	13.00
5536.0	27.17	118.76	18.60	104.57	87.68	13.29	12.32	12.00
5538.0	26.49	117.59	18.59	104.66	87.50	13.36	12.32	11.00
5540.0	23.29	127.52	18.58	104.61	87.34	13.38	12.33	13.00
5542.0	33.52	235.18	18.57	104.71	87.76	13.38	12.33	12.00
5544.0	22.42	132.83	18.57	104.75	87.95	13.38	12.27	17.00
5546.0	24.91	132.42	18.52	104.90	88.14	13.66	12.25	14.00
5550.0	24.75	114.89	18.57	104.57	87.31	13.43	12.25	14.00
5552.0	25.30	121.35	18.56	104.55	87.00	13.58	12.27	11.00
5554.0	17.86	85.99	18.56	104.60	87.34	13.60	12.26	4.00
5558.0	13.60	81.11	18.54	104.23	87.43	13.63	12.19	13.00
5560.0	24.15	88.47	18.51	104.56	87.47	13.71	12.12	15.00
5566.0	21.00	300.49	18.52	105.45	88.66	13.70	12.05	8.00
5568.0	23.19	268.67	18.46	106.03	89.59	13.88	12.08	6.00
5574.0	31.06	77.37	18.50	105.89	88.45	13.91	12.30	5.00
5576.0	26.29	83.85	18.51	105.56	89.39	13.90	12.29	10.00
5578.0	34.58	276.71	18.54	105.33	88.75	13.71	12.35	8.00
5584.0	34.84	351.71	18.64	105.29	87.80	13.42	12.33	16.00
5590.0	32.99	111.67	18.60	105.46	86.52	13.47	12.26	16.00
5592.0	13.38	162.72	18.57	104.87	84.70	13.70	12.28	9.00
5594.0	12.89	238.00	18.60	104.80	85.49	13.61	12.37	7.00
5596.0	14.90	142.31	18.69	104.80	85.60	13.21	12.38	14.00
5598.0	16.13	150.11	18.66	104.79	85.41	13.38	12.38	8.00
5600.0	29.26	135.53	18.62	104.77	84.17	13.50	12.38	10.00
5604.0	25.90	140.15	18.64	104.80	84.49	13.33	12.41	13.00
5606.0	29.07	138.72	18.60	104.86	85.92	13.40	12.43	12.00
5608.0	26.52	132.34	18.61	104.67	84.66	13.26	12.44	14.00
5610.0	24.79	127.12	18.63	105.09	85.74	13.20	12.43	14.00
5612.0	31.16	115.52	18.65	105.23	85.91	13.12	12.42	13.00
5614.0	31.74	114.66	18.63	105.03	84.86	13.14	12.42	12.00
5616.0	30.65	112.53	18.62	104.91	83.98	13.25	12.57	13.00
5620.0	31.35	227.97	18.64	104.76	84.36	13.21	12.38	13.00
5622.0	42.25	340.36	18.61	105.17	84.26	13.31	12.34	13.00
5624.0	42.56	340.56	18.57	105.24	84.41	13.65	12.31	13.00
5626.0	42.16	341.36	18.58	105.48	86.37	13.66	12.29	13.00
5632.0	27.30	213.19	18.55	105.80	85.68	13.61	12.26	7.00
5634.0	23.50	212.15	18.48	106.05	87.18	14.04	12.22	11.00
5636.0	35.27	280.07	18.42	105.89	85.78	14.08	12.17	15.00
5638.0	32.48	281.03	18.36	105.95	87.03	14.17	11.94	12.00
5640.0	23.34	284.18	18.33	105.72	87.82	14.28	12.04	7.00
5642.0	28.48	348.38	18.31	105.86	88.79	14.56	12.06	5.00
5644.0	33.47	347.83	18.33	105.83	88.28	14.41	12.04	5.00
5646.0	28.35	263.65	18.30	105.87	87.25	14.62	11.95	7.00
5648.0	29.04	266.44	18.24	105.46	86.40	14.97	11.90	12.00
5650.0	29.38	264.74	18.24	105.94	87.47	15.01	11.88	13.00
5652.0	21.12	273.13	18.24	106.57	88.11	15.04	11.83	11.00
5654.0	3.79	97.93	18.26	104.52	86.23	15.10	11.80	16.00

Depth Feet	True Dip degree	Dip Azimuth degree	Borehole Deviation degree	Borehole Azimuth degree	Pad1 Azimuth degree	Caliper 1-3 inches	Caliper 2-4 inches	Quality Index

Schlumberger

Company:	C. E. EXPLORATION		
Well:	NEWBERRY #86-21		
FIELD:	NEWBERRY KGRA		
COUNTY	DESCHUTES		
STATE	OREGON		
Date Logged:	29-Oct-1995	Date Processed:	02-Nov-1995
Well Location:	1000'N & 200'W OF SE CORNER SEC 21		
Elevations:	KB:	DF:	GL:
API Number:	N/A	Job Number:	13005556