



September 23, 2008

Harris County MUD #69
c/o Municipal District Services
16758 Telge
Cypress, Texas 77429

Attention: Board of Directors

Reference: Water Well #1- Performance Testing

Members of the Board,

Collection and evaluation of field data pertaining to the operation of the well and well pumping equipment was recently completed at the facility referenced above. Included in this report please find the test results and pump curve generated by the testing. Historical performance data is presented in graphical format.

PERFORMANCE TEST REVIEW								
Hydraulic Performance of pump is 972 GPM @ 349' field head	Excellent	<input checked="" type="checkbox"/>	Good	<input type="checkbox"/>	Marginal	<input type="checkbox"/>	Poor	<input type="checkbox"/>
Overall efficiency is 64 percent	Excellent	<input type="checkbox"/>	Good	<input checked="" type="checkbox"/>	Satisfactory	<input type="checkbox"/>	Poor	<input type="checkbox"/>
Pump Submergence 117 feet	Excellent	<input checked="" type="checkbox"/>	Good	<input type="checkbox"/>	Marginal	<input type="checkbox"/>	Poor	<input type="checkbox"/>
Vibration Analysis	Excellent	<input checked="" type="checkbox"/>	Good	<input type="checkbox"/>	Marginal	<input type="checkbox"/>	Poor	<input type="checkbox"/>
Suspended Solids Testing	Excellent	<input checked="" type="checkbox"/>	Good	<input type="checkbox"/>	Marginal	<input type="checkbox"/>	Poor	<input type="checkbox"/>
Brass Observed in SST	None	<input checked="" type="checkbox"/>	Trace	<input type="checkbox"/>	Substantial	<input type="checkbox"/>	Excessive	<input type="checkbox"/>
Flowmeter Accuracy is 97.1 percent								

The test indicates the pump appears to be operating in satisfactory condition.

We appreciate this opportunity to be of service. If you have any questions or comments, please call.

Sincerely,
Gary McMurrey
G-M Services



Performance Test Report

SPECIALIZED INSPECTION SERVICES FOR THE WATER INDUSTRY

website: www.g-mservices.com

phone: 281-894-8971

Facility Harris County M.U.D. #69 - well #1 **Test Date** 08/13/2008
U.S.G.S. # LJ-65-03-615

PUMP DATA

Manufacturer : Flowserve
 Bowl Type : 10" EBM
 Stages : 12
 Setting : 448
 Column Size : 8" X 2 1/2" X 1 1/16"
 Design Point : 1000 GPM @ 375' TDH

MOTOR DATA

Manufacturer : U.S. Motors
 Size (HP) : 200
 Amps/Volts : 228/460
 Serial # : R-6377-08-424
 Frame : 445TPA
 Speed (RPM) : 1770

PERFORMANCE TEST DATA

Static Lvl (ft) -295

Discharge Pressure	8	8
Capacity (GPM)	972	972
Pumping Lvl (ft)	-331	-331
Drawdown (ft)	36	36
Specific Capacity	27.00	27.00
Field Head (ft)	349.48	349.48
Water Horsepower	85.78	85.87
Overall Efficiency	64%	64%
Horsepower Input	133.20	133.20
Kilowatt Input	99.4	99.4
Amp Draw	160-142-134	160-142-134
Voltage	480-470	480-470
Sand (PPM)	1	1
Time (min)	45	45

Additional Data

Pump Submergence (ft)	117	Brass Detect	No	Airline Functional	Yes
KWH/Million Gallons	1,704.39	ETM Read	5239	Right Angle Drive	Yes
Start-up Sand (PPM)	1	Meter Read	27937	Meter Accuracy	97.1%

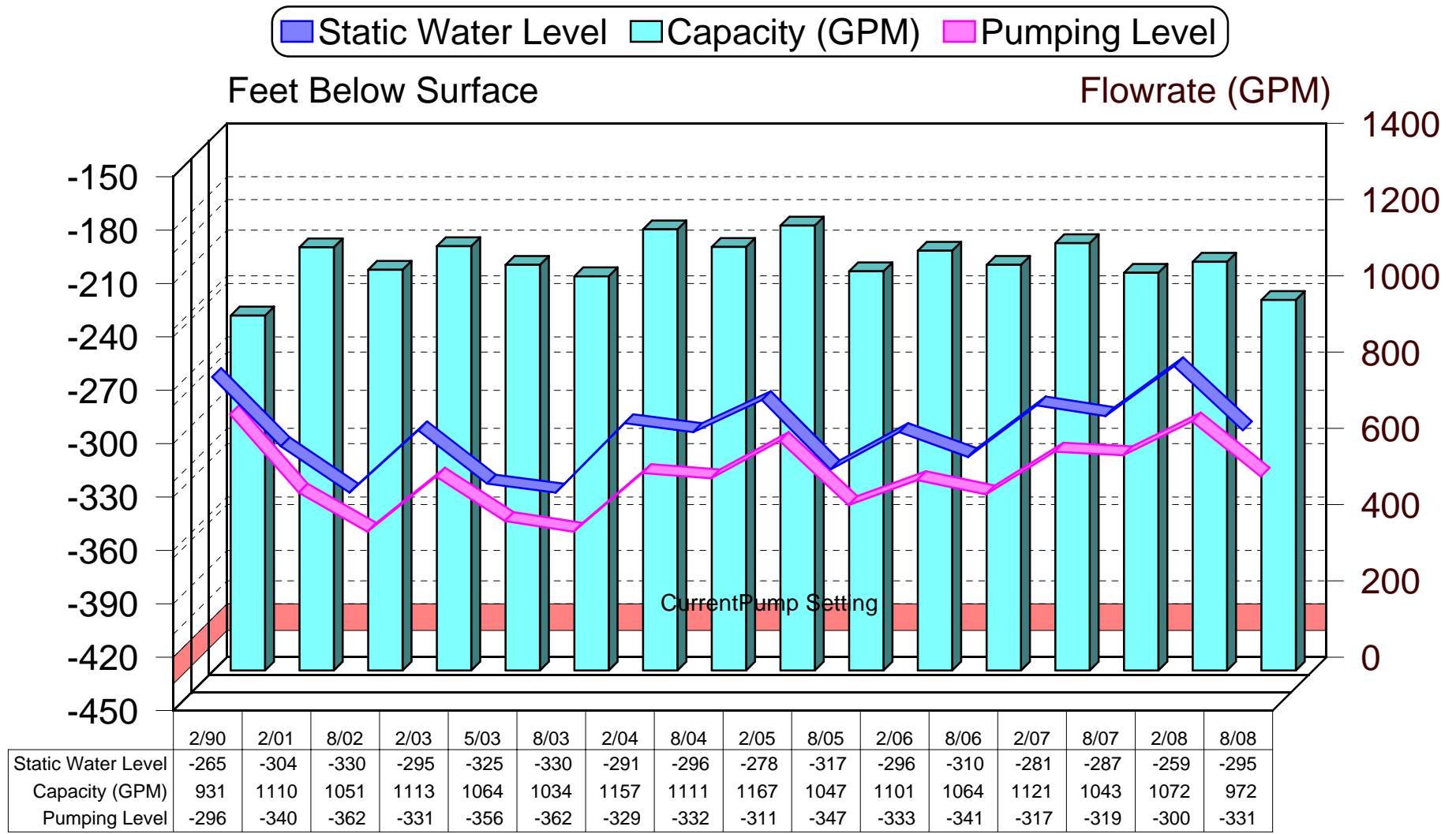
Flowmeter registers 944 GPM at 8 PSI discharge pressure.

Remarks

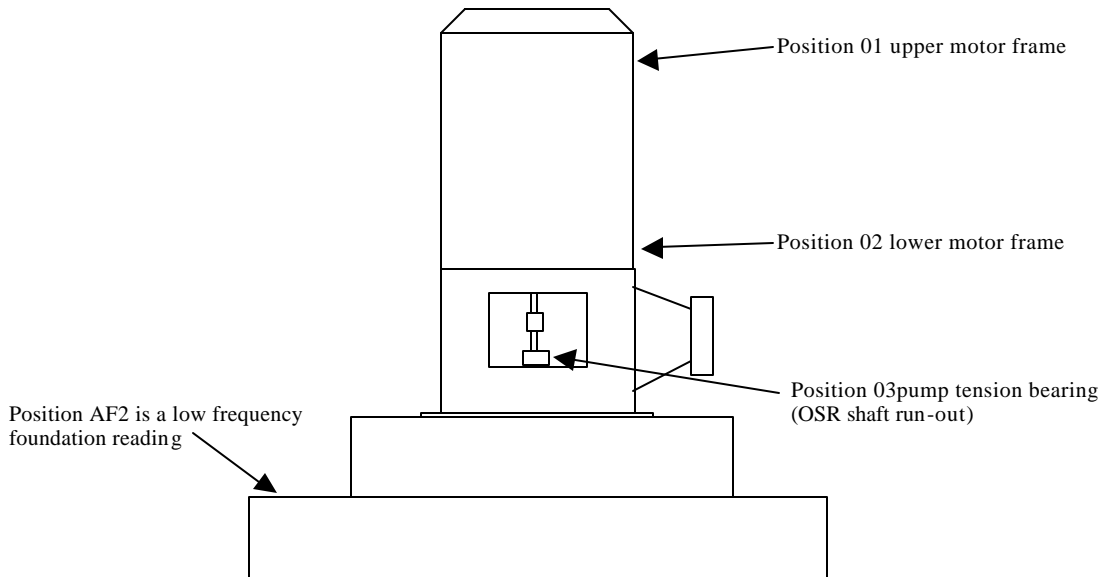
At 40 PSI, harmonic noise originating from motor - opened valve back up to normal operating pressure.

Harris County M.U.D. #69

Well #1



VIBRATION ANALYSIS DATA TYPE 3 Machine



Explanation of vibration Identification System

First digit is measurement location

Second digit is direction

01 = upper motor bearing

1 = horizontal

02 = lower motor bearing

2 = vertical

03 = pump tension bearing

3 = axial

Example: Position 022 is the lower motor bearing vertical direction.
 Position 031 is the pump tension bearing horizontal direction.

Measurement points are taken at each bearing. The points are numbered starting at the driver and ending at the driven end.

Note: Position AF2 is an acceleration reading on the pump foundation (axial position)
 Position OSR is a shaft rider reading at the top of the tension bearing.

Abbreviated Last Measurement Summary

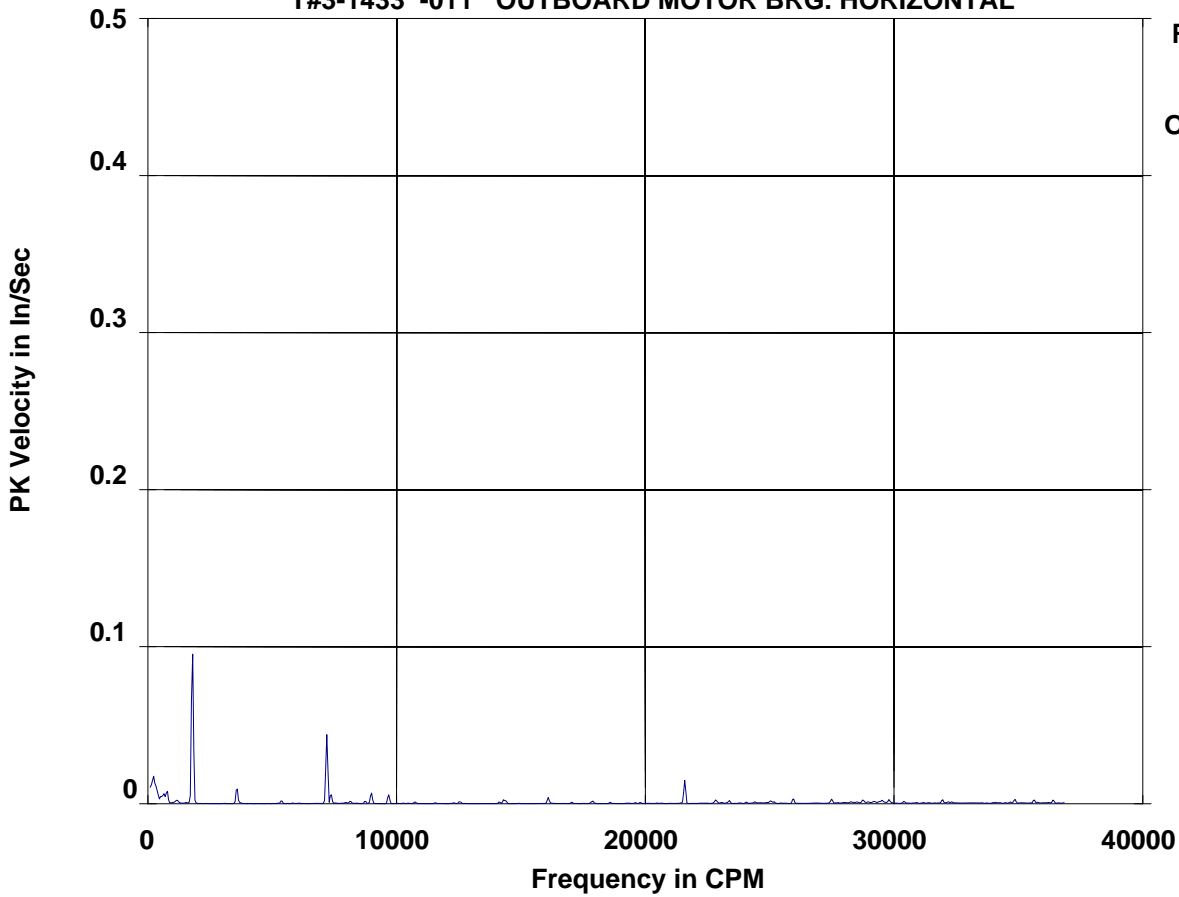
Database: C:\PMDATA\2007.DAT
 Station: Type #3
 Report Date: 02-SEP-08 09:13

MEASUREMENT POINT	OVERALL LEVEL	HFD / VHFD
T#3-1433 - Harris Co MUD #69	(13-AUG-08)	
	OVERALL LEVEL	1. - 20kHz
011 - OUTBOARD MOTOR BRG. HORIZONTAL	.116 In/Sec	.010 G-s
012 - OUTBOARD MOTOR BRG. VERTICAL	.175 In/Sec	.0020 G-s
013 - OUTBOARD MOTOR BRG. AXIAL	.029 In/Sec	.0020 G-s
021 - INBOARD MOTOR BRG. HORIZONTAL	.088 In/Sec	.0026 G-s
022 - INBOARD MOTOR BRG. VERTICAL	.070 In/Sec	.0020 G-s
023 - INBOARD MOTOR BRG. AXIAL	.016 In/Sec	.061 G-s
031 - INBOARD PUMP BRG. HORIZONTAL	.014 In/Sec	.0022 G-s
033 - INBOARD PUMP BRG. AXIAL	.022 In/Sec	.0069 G-s
A11 - OUTBOARD MOTOR BRG. ACCELERATION	.389 G-s	
A21 - INBOARD MOTOR BRG. ACCELERATION	.098 G-s	
A31 - INBOARD PUMP BRG. ACCELERATION	.083 G-s	
AF2 - LOW FREQUENCY ACCEL. ON FOUNDAT.	.010 G-s	
OSR - SHAFT RIDER RADIAL	1.426 In/Sec	.757 G-s

Clarification Of Vibration Units:

G-s PK
 In/Sec PK

T#3 - Harris Co MUD #69
T#3-1433 -011 OUTBOARD MOTOR BRG. HORIZONTAL



LIST OF SPECTRAL PEAKS

Machine: (T#3) Harris Co MUD #69
Meas. Point: T#3-1433 -011 --> OUTBOARD MOTOR BRG. HORIZONTAL
Date/Time: 13-AUG-08 11:52:06 RPM= 1800. Units=In/Sec PK

PEAK NO.	FREQUENCY (CPM)	PEAK VALUE	ORDER VALUE	PEAK NO.	FREQUENCY (CPM)	PEAK VALUE	ORDER VALUE
1	212.8	.0193	.118	13	21584.7	.0149	11.991
2	630.5	.0069	.350	14	22837.6	.0025	12.688
3	766.1	.0088	.426	15	23372.7	.0021	12.985
4	1172.7	.0025	.652	16	25946.8	.0034	14.415
5	1788.2	.0984	.993	17	27491.7	.0030	15.273
6	3577.4	.0106	1.987	18	28750.6	.0027	15.973
7	7194.2	.0442	3.997	19	29526.7	.0024	16.404
8	7358.9	.0065	4.088	20	29798.4	.0026	16.555
9	8981.3	.0071	4.990	21	31942.7	.0027	17.746
10	9676.3	.0059	5.376	22	34853.6	.0029	19.363
11	14312.3	.0027	7.951	23	35628.6	.0027	19.794
12	16093.6	.0040	8.941	24	36399.1	.0025	20.222

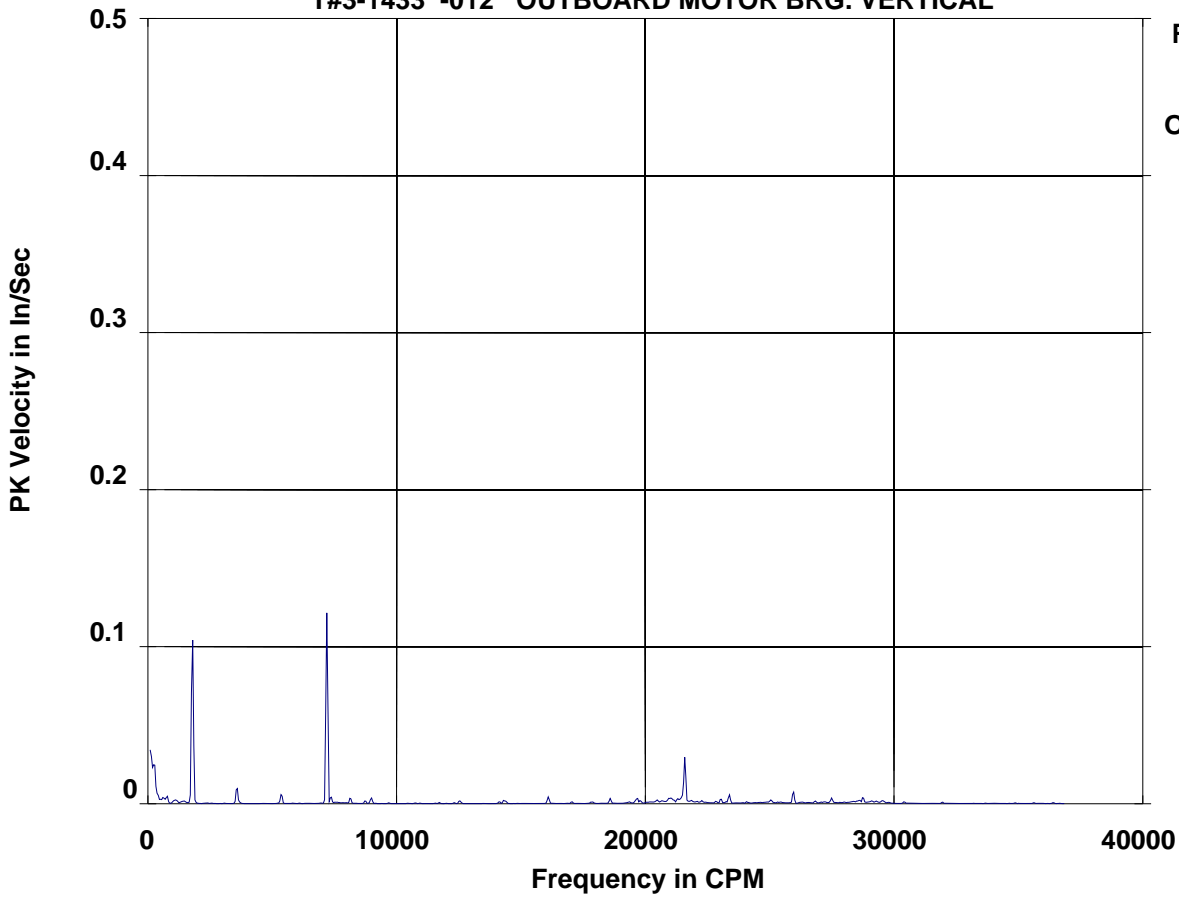
TOTAL MAG .1127
(ELECTRICAL= 0.00E+00/ 0%

SUBSYNCHRONOUS .0224 / 4%

SYNCHRONOUS .1097 / 95%
FLOOR= .0118

NONSYNCHRONOUS .0131 / 1%
SPEC CREST= 1.98)

**T#3 - Harris Co MUD #69
T#3-1433 -012 OUTBOARD MOTOR BRG. VERTICAL**



**Route Spectrum
13-AUG-08 11:52:20**

**OVRALL= .1751 V-DG
PK = .1754
LOAD = 100.0
RPM = 1800.
RPS = 30.00**

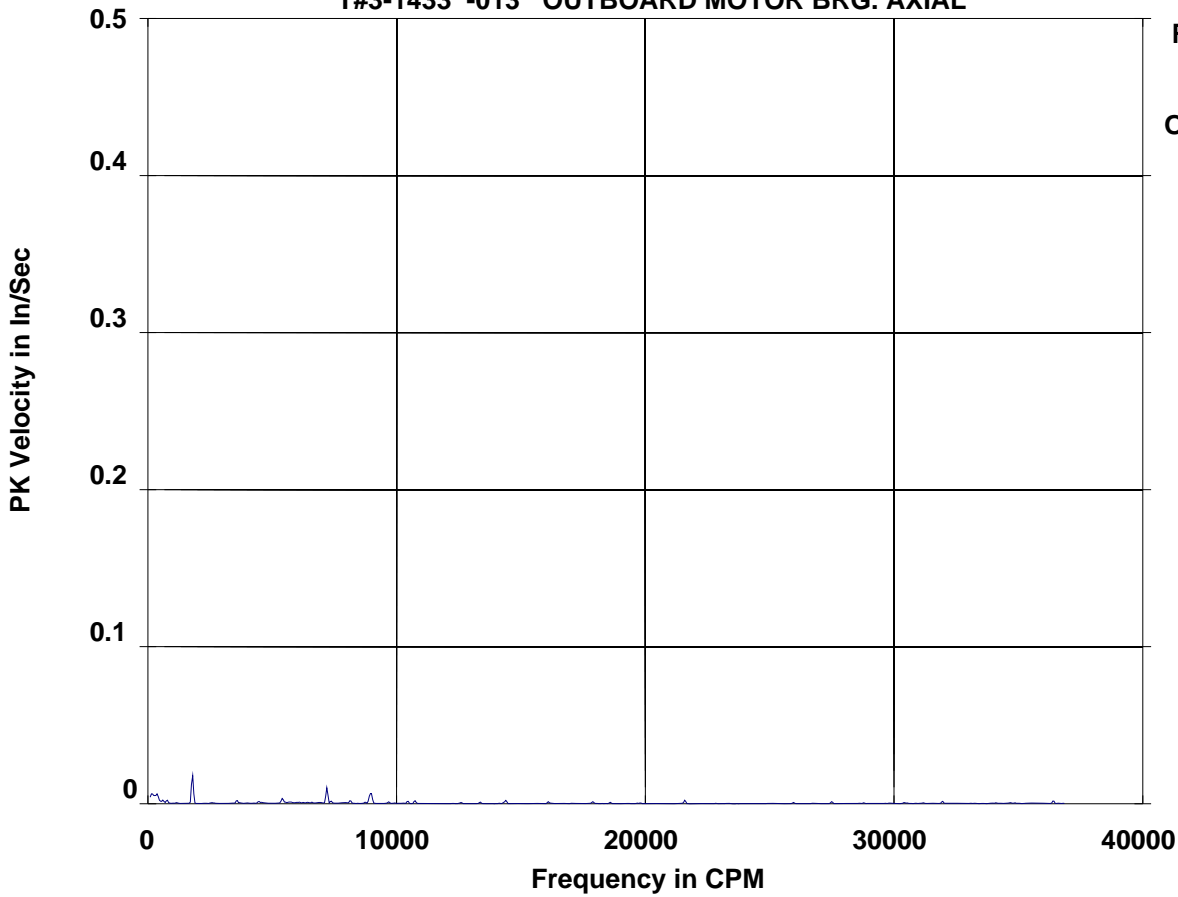
LIST OF SPECTRAL PEAKS

Machine: (T#3) Harris Co MUD #69
 Meas. Point: T#3-1433 -012 --> OUTBOARD MOTOR BRG. VERTICAL
 Date/Time: 13-AUG-08 11:52:20 RPM= 1800. Units=In/Sec PK

PEAK NO.	FREQUENCY (CPM)	PEAK VALUE	ORDER VALUE	PEAK NO.	FREQUENCY (CPM)	PEAK VALUE	ORDER VALUE
1	253.2	.0291	.141	13	16097.6	.0044	8.943
2	485.1	.0033	.270	14	18586.9	.0034	10.326
3	619.0	.0044	.344	15	19671.6	.0038	10.929
4	767.5	.0053	.426	16	20958.6	.0040	11.644
5	1130.3	.0028	.628	17	21009.4	.0041	11.672
6	1788.7	.1074	.994	18	21321.1	.0035	11.845
7	3577.1	.0109	1.987	19	21587.3	.0299	11.993
8	5366.2	.0063	2.981	20	23036.5	.0033	12.798
9	7195.8	.1217	3.998	21	23374.2	.0058	12.986
10	7359.6	.0047	4.089	22	25948.4	.0080	14.416
11	8136.2	.0039	4.520	23	27489.5	.0037	15.272
12	8980.9	.0038	4.989	24	28750.9	.0044	15.973

TOTAL MAG	SUBSYNCHRONOUS	SYNCHRONOUS	NONSYNCHRONOUS
.1691	.0302 / 3%	.1656 / 96%	.0157 / 1%
(ELECTRICAL=	0.00E+00/ 0%	FLOOR= .0114	SPEC CREST= 1.40)

T#3 - Harris Co MUD #69
T#3-1433 -013 OUTBOARD MOTOR BRG. AXIAL



Route Spectrum
13-AUG-08 11:52:34
OVRALL= .0285 V-DG
PK = .0286
LOAD = 100.0
RPM = 1800.
RPS = 30.00

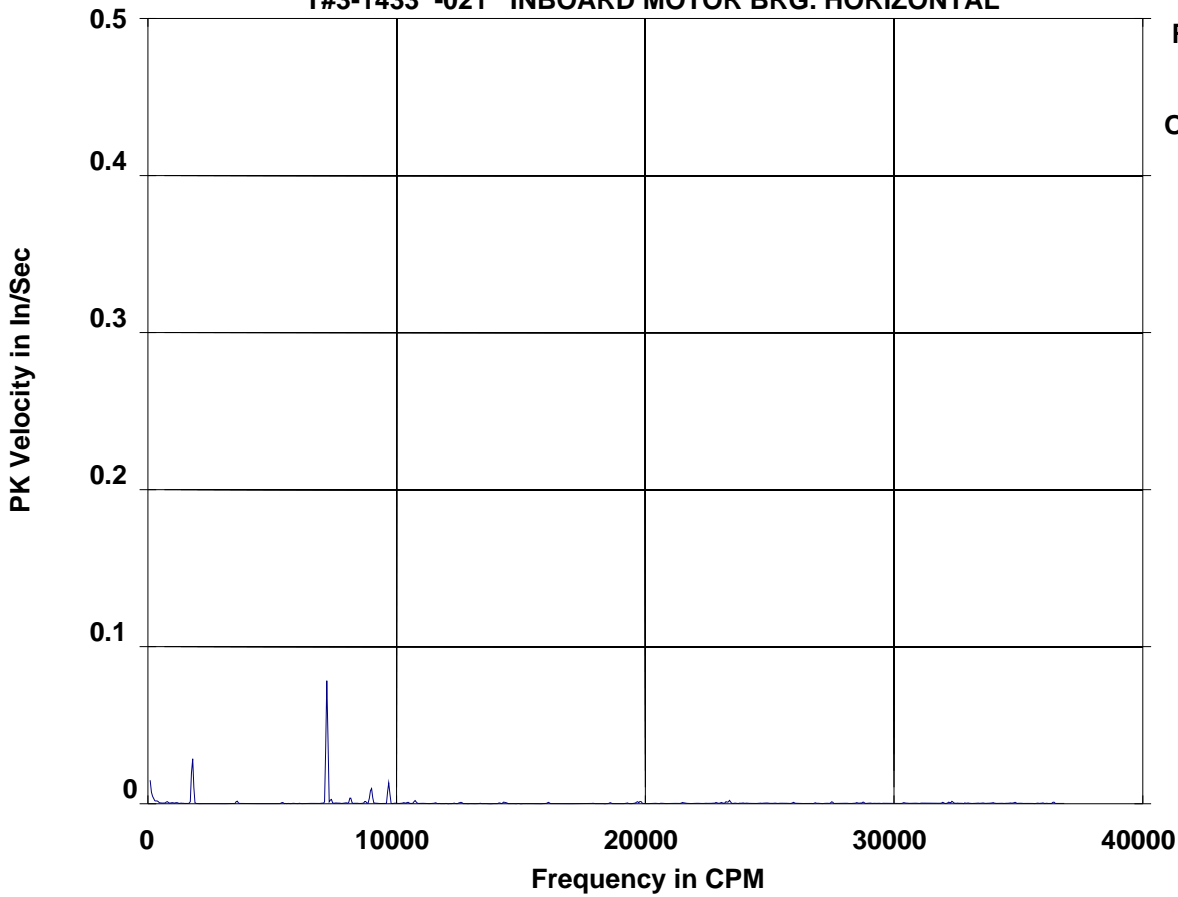
LIST OF SPECTRAL PEAKS

Machine: (T#3) Harris Co MUD #69
Meas. Point: T#3-1433 -013 --> OUTBOARD MOTOR BRG. AXIAL
Date/Time: 13-AUG-08 11:52:34 RPM= 1800. Units=In/Sec PK

PEAK NO.	FREQUENCY (CPM)	PEAK VALUE	ORDER VALUE	PEAK NO.	FREQUENCY (CPM)	PEAK VALUE	ORDER VALUE
1	160.9	.0074	.089	13	8136.2	.0021	4.520
2	352.0	.0069	.196	14	8970.0	.0077	4.983
3	590.3	.0024	.328	15	9680.6	.0012	5.378
4	767.6	.0024	.426	16	10448.7	.0018	5.805
5	1788.5	.0185	.994	17	10733.6	.0020	5.963
6	3577.0	.0023	1.987	18	14392.8	.0022	7.996
7	4455.5	.0015	2.475	19	16097.9	.0014	8.943
8	5409.4	.0036	3.005	20	17885.6	.0013	9.936
9	5699.5	.0013	3.166	21	21588.8	.0023	11.994
10	6073.7	.0011	3.374	22	27496.9	.0013	15.276
11	7198.2	.0102	3.999	23	31946.3	.0016	17.748
12	7359.6	.0018	4.089	24	36407.6	.0020	20.226

TOTAL MAG .0261
(ELECTRICAL= 0.00E+00/ 0%
SUBSYNCHRONOUS .0107 / 17%
SYNCHRONOUS .0225 / 74%
FLOOR= .0070
NONSYNCHRONOUS .0080 / 9%
SPEC CREST= 2.91)

**T#3 - Harris Co MUD #69
T#3-1433 -021 INBOARD MOTOR BRG. HORIZONTAL**



**Route Spectrum
13-AUG-08 11:52:50**

**OVRALL= .0877 V-DG
PK = .0878
LOAD = 100.0
RPM = 1800.
RPS = 30.00**

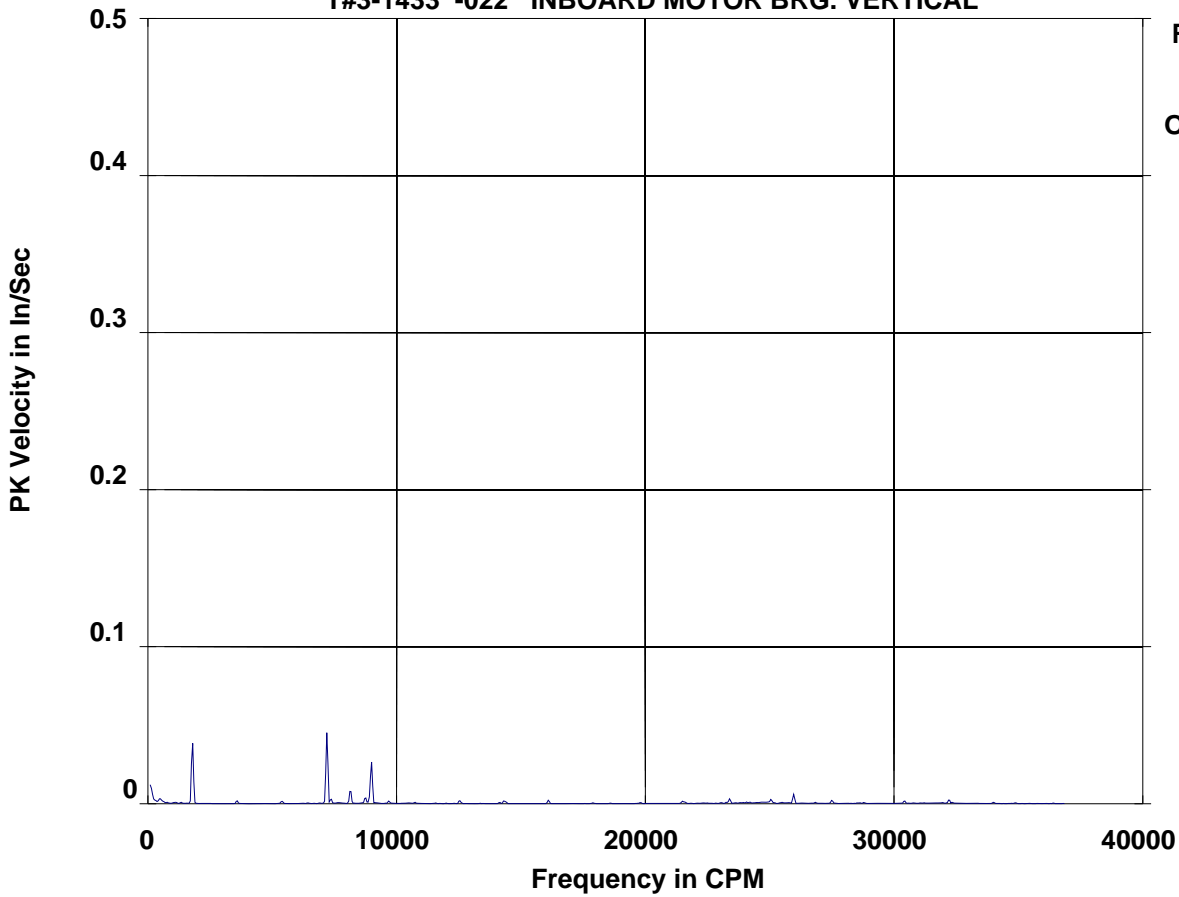
LIST OF SPECTRAL PEAKS

Machine: (T#3) Harris Co MUD #69
 Meas. Point: T#3-1433 -021 --> INBOARD MOTOR BRG. HORIZONTAL
 Date/Time: 13-AUG-08 11:52:50 RPM= 1800. Units=In/Sec PK

PEAK NO.	FREQUENCY (CPM)	PEAK VALUE	ORDER VALUE	PEAK NO.	FREQUENCY (CPM)	PEAK VALUE	ORDER VALUE
1	346.9	.0021	.193	13	14315.9	.0011	7.953
2	765.5	.0015	.425	14	16102.6	.0010	8.946
3	1788.8	.0295	.994	15	19677.5	.0014	10.932
4	3579.1	.0018	1.988	16	19804.5	.0016	11.002
5	7197.8	.0787	3.999	17	23258.4	.0014	12.921
6	7360.9	.0030	4.089	18	23383.3	.0022	12.991
7	8139.2	.0042	4.522	19	27503.8	.0013	15.280
8	8739.7	.0017	4.855	20	28756.7	.0011	15.976
9	8975.0	.0107	4.986	21	32204.9	.0011	17.892
10	9680.4	.0134	5.378	22	32337.2	.0016	17.965
11	10452.8	.0010	5.807	23	34854.6	.0010	19.364
12	10735.8	.0021	5.964	24	36412.7	.0012	20.229

TOTAL MAG	SUBSYNCHRONOUS	SYNCHRONOUS	NONSYNCHRONOUS
.0862	.0025 / 0%	.0848 / 97%	.0151 / 3%
(ELECTRICAL=	0.00E+00/ 0%	FLOOR= .0052	SPEC CREST= 1.10)

**T#3 - Harris Co MUD #69
T#3-1433 -022 INBOARD MOTOR BRG. VERTICAL**



**Route Spectrum
13-AUG-08 11:53:04**

**OVRALL= .0699 V-DG
PK = .0700
LOAD = 100.0
RPM = 1800.
RPS = 30.00**

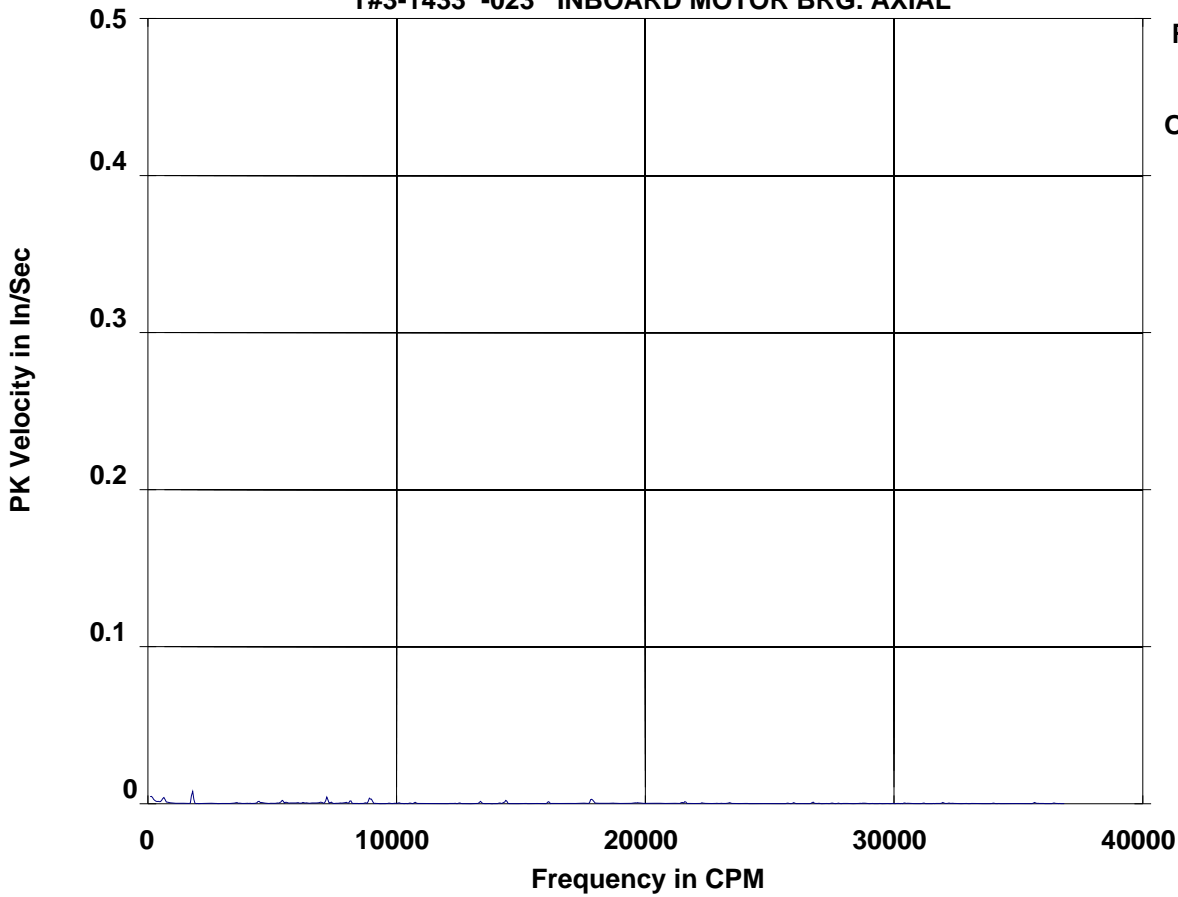
LIST OF SPECTRAL PEAKS

Machine: (T#3) Harris Co MUD #69
 Meas. Point: T#3-1433 -022 --> INBOARD MOTOR BRG. VERTICAL
 Date/Time: 13-AUG-08 11:53:04 RPM= 1800. Units=In/Sec PK

PEAK NO.	FREQUENCY (CPM)	PEAK VALUE	ORDER VALUE	PEAK NO.	FREQUENCY (CPM)	PEAK VALUE	ORDER VALUE
1	484.7	.0037	.269	13	16104.0	.0023	8.947
2	1789.5	.0395	.994	14	21503.5	.0017	11.946
3	3579.9	.0020	1.989	15	23386.6	.0032	12.993
4	5381.2	.0016	2.990	16	24063.5	.0011	13.369
5	7198.9	.0455	3.999	17	24198.1	.0011	13.443
6	7360.9	.0031	4.089	18	24652.6	.0012	13.696
7	8139.3	.0092	4.522	19	24835.7	.0012	13.798
8	8742.1	.0042	4.857	20	25052.0	.0029	13.918
9	8984.4	.0272	4.991	21	25962.9	.0060	14.424
10	9682.0	.0018	5.379	22	27499.8	.0023	15.278
11	12527.3	.0021	6.960	23	30418.9	.0019	16.899
12	14317.3	.0019	7.954	24	32210.9	.0027	17.895

TOTAL MAG	SUBSYNCHRONOUS	SYNCHRONOUS	NONSYNCHRONOUS
.0678	.0037 / 0%	.0662 / 95%	.0140 / 4%
(ELECTRICAL=	0.00E+00/ 0%	FLOOR= .0063	SPEC CREST= 1.59)

T#3 - Harris Co MUD #69
T#3-1433 -023 INBOARD MOTOR BRG. AXIAL



LIST OF SPECTRAL PEAKS

Machine: (T#3) Harris Co MUD #69
Meas. Point: T#3-1433 -023 --> INBOARD MOTOR BRG. AXIAL
Date/Time: 13-AUG-08 11:53:28 RPM= 1800. Units=In/Sec PK

PEAK NO.	FREQUENCY (CPM)	PEAK VALUE	ORDER VALUE	PEAK NO.	FREQUENCY (CPM)	PEAK VALUE	ORDER VALUE
1	116.6	.0055	.065	13	7962.0	.0010	4.423
2	395.0	.0017	.219	14	8140.3	.0021	4.522
3	627.9	.0043	.349	15	8917.9	.0039	4.954
4	1789.6	.0080	.994	16	10751.6	.0009	5.973
5	4454.5	.0018	2.475	17	13369.8	.0016	7.428
6	4547.8	.0009	2.527	18	14400.5	.0022	8.000
7	5410.2	.0023	3.006	19	16106.6	.0014	8.948
8	5558.8	.0010	3.088	20	17826.1	.0032	9.903
9	6244.8	.0009	3.469	21	21475.1	.0009	11.931
10	6947.2	.0011	3.860	22	21601.0	.0014	12.001
11	7200.6	.0043	4.000	23	26736.5	.0010	14.854
12	7364.9	.0010	4.092	24	35652.6	.0009	19.807

TOTAL MAG .0139
(ELECTRICAL= 0.00E+00/ 0%

SUBSYNCHRONOUS .0072 / 27%

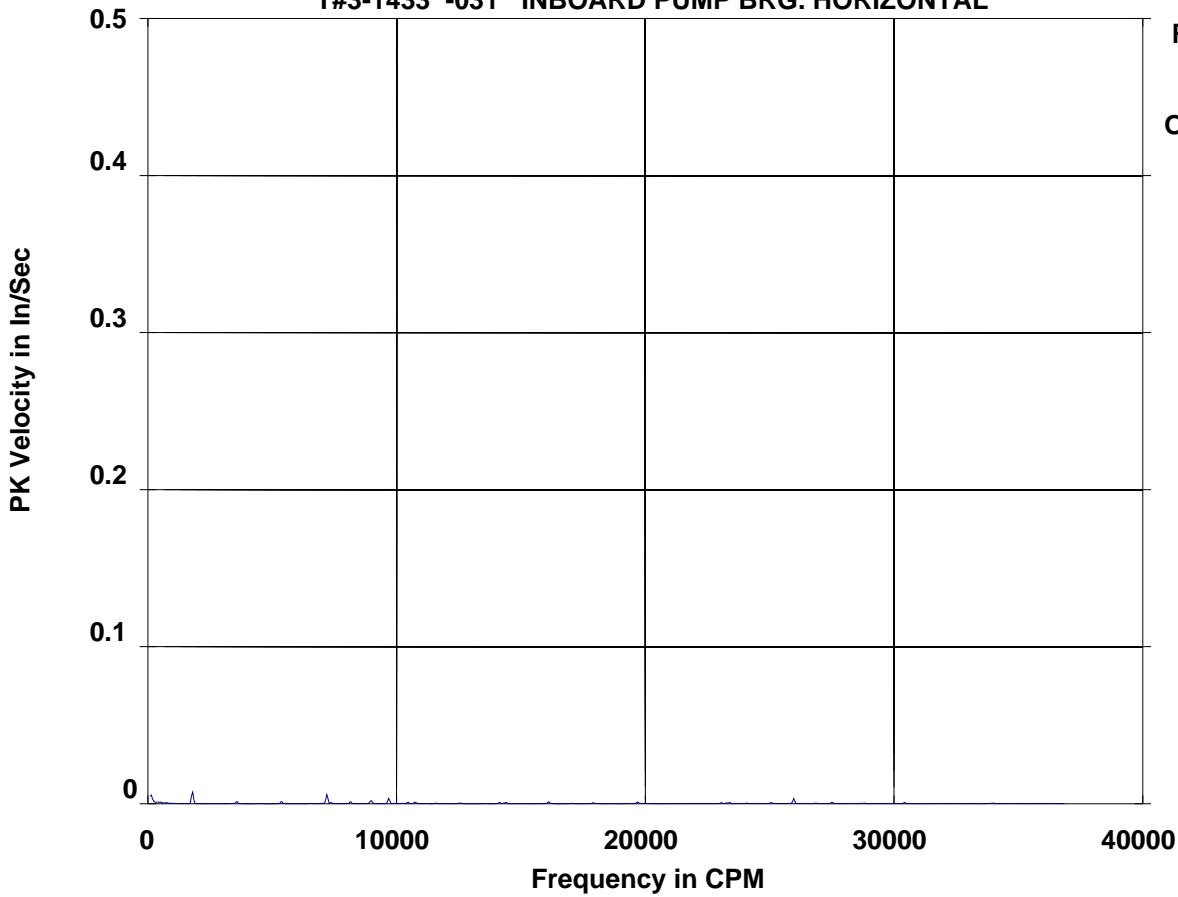
SYNCHRONOUS .0097 / 49%

FLOOR= .0050

NONSYNCHRONOUS .0068 / 24%

SPEC CREST= 2.72)

**T#3 - Harris Co MUD #69
T#3-1433 -031 INBOARD PUMP BRG. HORIZONTAL**



**Route Spectrum
13-AUG-08 11:53:52**

**OVRALL= .0140 V-DG
PK = .0140
LOAD = 100.0
RPM = 1800.
RPS = 30.00**

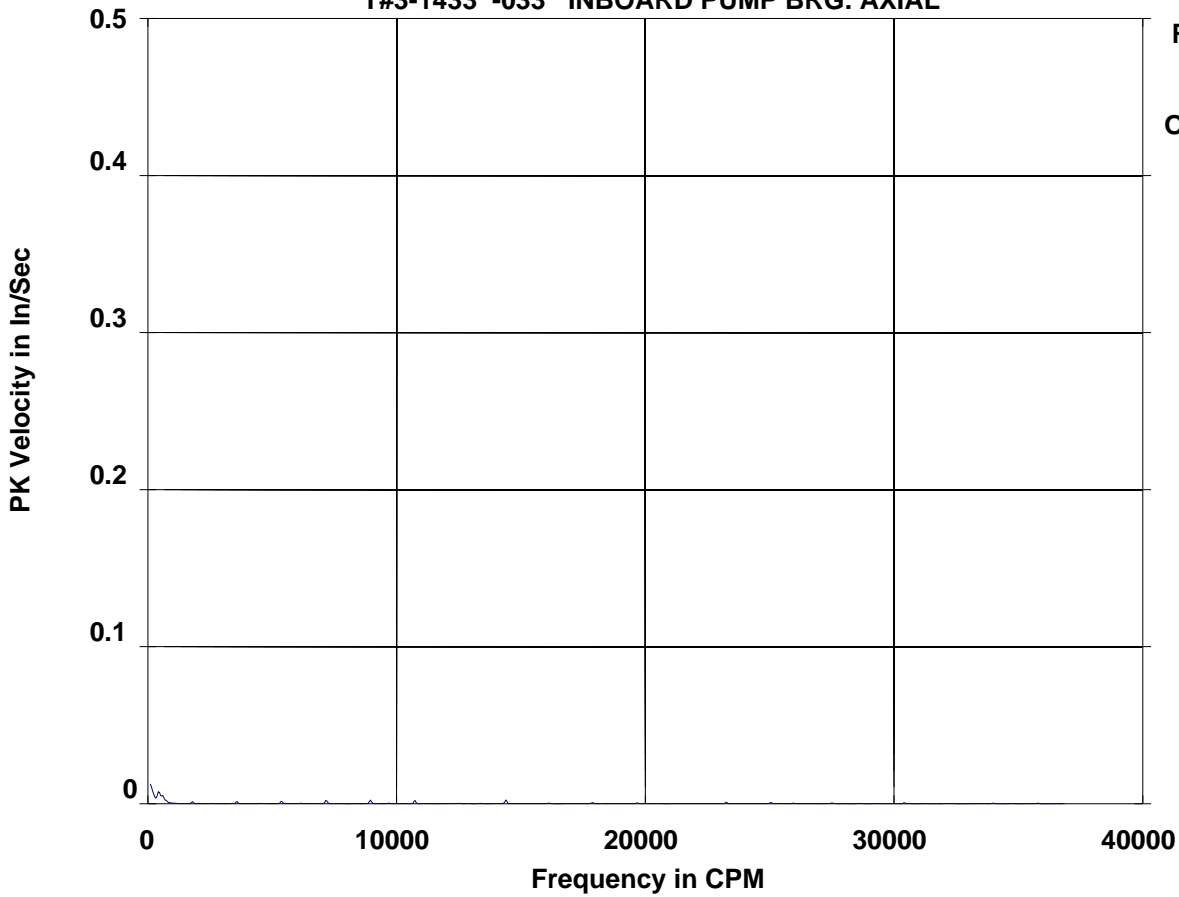
LIST OF SPECTRAL PEAKS

Machine: (T#3) Harris Co MUD #69
 Meas. Point: T#3-1433 -031 --> INBOARD PUMP BRG. HORIZONTAL
 Date/Time: 13-AUG-08 11:53:52 RPM= 1800. Units=In/Sec PK

PEAK NO.	FREQUENCY (CPM)	PEAK VALUE	ORDER VALUE	PEAK NO.	FREQUENCY (CPM)	PEAK VALUE	ORDER VALUE
1	119.6	.0061	.066	13	10453.6	.0010	5.808
2	391.5	.0012	.217	14	10738.2	.0011	5.966
3	490.7	.0012	.273	15	14137.8	.0009	7.854
4	722.7	.0008	.402	16	14400.2	.0009	8.000
5	1789.6	.0077	.994	17	16106.9	.0013	8.948
6	3579.3	.0015	1.989	18	17896.4	.0008	9.942
7	5369.8	.0015	2.983	19	19685.1	.0012	10.936
8	7200.0	.0059	4.000	20	23389.4	.0008	12.994
9	7364.0	.0008	4.091	21	25057.0	.0008	13.921
10	8142.8	.0013	4.524	22	25967.6	.0032	14.426
11	8974.4	.0022	4.986	23	27512.0	.0011	15.284
12	9685.7	.0034	5.381	24	30424.5	.0009	16.902

TOTAL MAG	SUBSYNCHRONOUS	SYNCHRONOUS	NONSYNCHRONOUS
.0133	.0064 / 23%	.0101 / 58%	.0059 / 19%
(ELECTRICAL=	0.00E+00/ 0%	FLOOR= .0022	SPEC CREST= 1.64)

**T#3 - Harris Co MUD #69
T#3-1433 -033 INBOARD PUMP BRG. AXIAL**



**Route Spectrum
13-AUG-08 11:54:30**

**OVRALL= .0218 V-DG
PK = .0218
LOAD = 100.0
RPM = 1800.
RPS = 30.00**

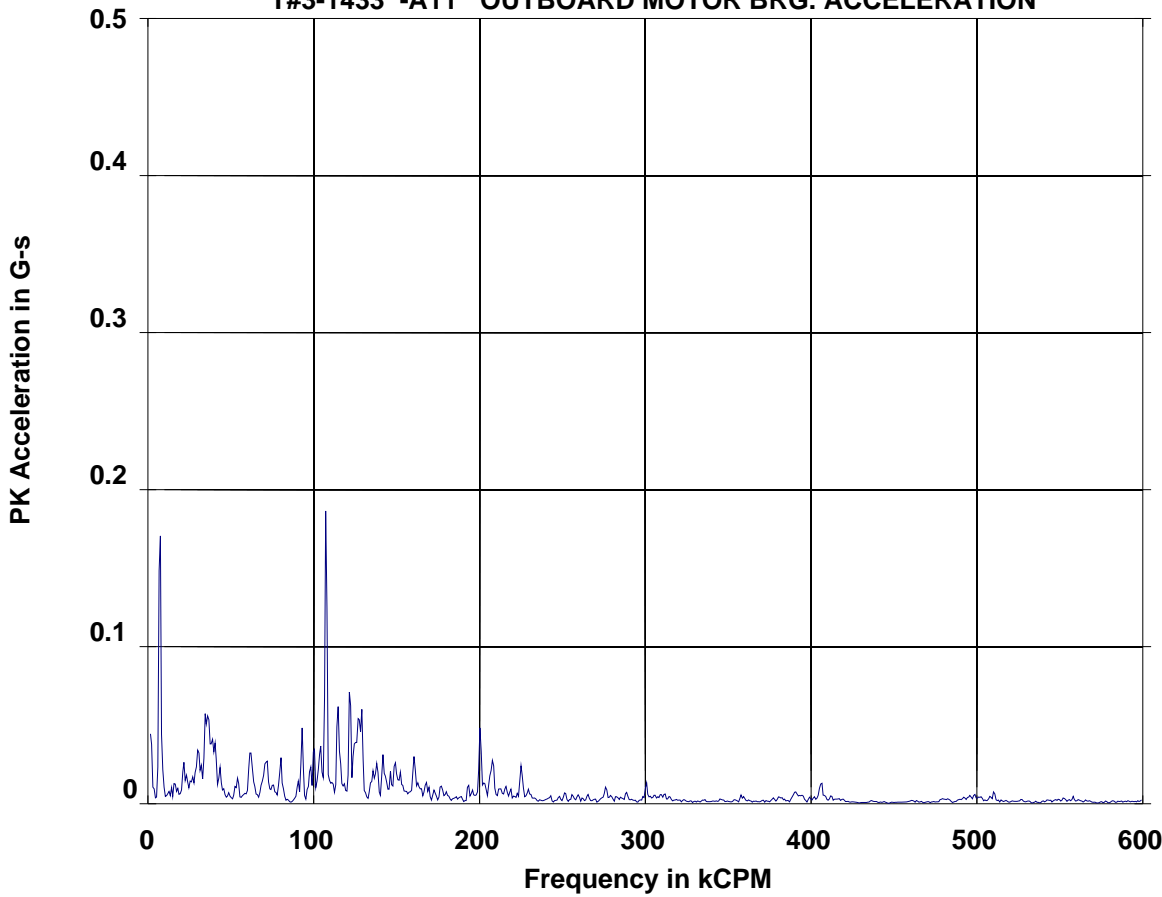
LIST OF SPECTRAL PEAKS

Machine: (T#3) Harris Co MUD #69
 Meas. Point: T#3-1433 -033 --> INBOARD PUMP BRG. AXIAL
 Date/Time: 13-AUG-08 11:54:30 RPM= 1800. Units=In/Sec PK

PEAK NO.	FREQUENCY (CPM)	PEAK VALUE	ORDER VALUE	PEAK NO.	FREQUENCY (CPM)	PEAK VALUE	ORDER VALUE
1	436.1	.0088	.242	13	17881.4	.0007	9.934
2	578.5	.0059	.321	14	19679.1	.0005	10.933
3	1788.2	.0013	.993	15	21475.6	3.33E-04	11.931
4	3578.1	.0015	1.988	16	23257.2	.0009	12.921
5	5369.1	.0017	2.983	17	25047.3	.0009	13.915
6	7168.5	.0023	3.983	18	25955.0	3.73E-04	14.419
7	8940.4	.0023	4.967	19	27498.9	.0006	15.277
8	9676.9	3.98E-04	5.376	20	28625.1	3.35E-04	15.903
9	10733.3	.0022	5.963	21	30413.1	.0008	16.896
10	13362.9	3.58E-04	7.424	22	32201.1	3.27E-04	17.889
11	14395.9	.0024	7.998	23	33990.6	3.97E-04	18.884
12	16105.7	4.05E-04	8.948	24	35778.5	4.43E-04	19.877

TOTAL MAG	SUBSYNCHRONOUS	SYNCHRONOUS	NONSYNCHRONOUS
.0120	.0106 / 78%	.0037 / 10%	.0043 / 13%
(ELECTRICAL=	0.00E+00/ 0%	FLOOR= .0166	SPEC CREST= 2.42)

**T#3 - Harris Co MUD #69
T#3-1433 -A11 OUTBOARD MOTOR BRG. ACCELERATION**



**Route Spectrum
13-AUG-08 11:54:46**

**OVRALL= .3887 A-DG
PK = .3906
LOAD = 100.0
RPM = 1800.
RPS = 30.00**

LIST OF SPECTRAL PEAKS

Machine: (T#3) Harris Co MUD #69
Meas. Point: T#3-1433 -A11 --> OUTBOARD MOTOR BRG. ACCELERATION
Date/Time: 13-AUG-08 11:54:46 RPM= 1800. Units=G-s PK

PEAK NO.	FREQUENCY (kCPM)	PEAK VALUE	ORDER VALUE	PEAK NO.	FREQUENCY (kCPM)	PEAK VALUE	ORDER VALUE
1	7.203	.1890	4.002	13	103.960	.0405	57.756
2	21.525	.0280	11.958	14	107.403	.1915	59.668
3	30.343	.0392	16.857	15	114.504	.0663	63.614
4	34.807	.0639	19.337	16	121.802	.0791	67.668
5	36.350	.0645	20.195	17	127.118	.0635	70.621
6	38.667	.0467	21.481	18	128.775	.0637	71.542
7	40.211	.0426	22.340	19	138.230	.0273	76.795
8	61.875	.0380	34.375	20	141.860	.0317	78.811
9	71.639	.0315	39.800	21	148.925	.0295	82.736
10	80.087	.0303	44.493	22	160.697	.0314	89.276
11	92.975	.0484	51.653	23	200.421	.0500	111.345
12	100.148	.0399	55.638	24	208.050	.0307	115.583

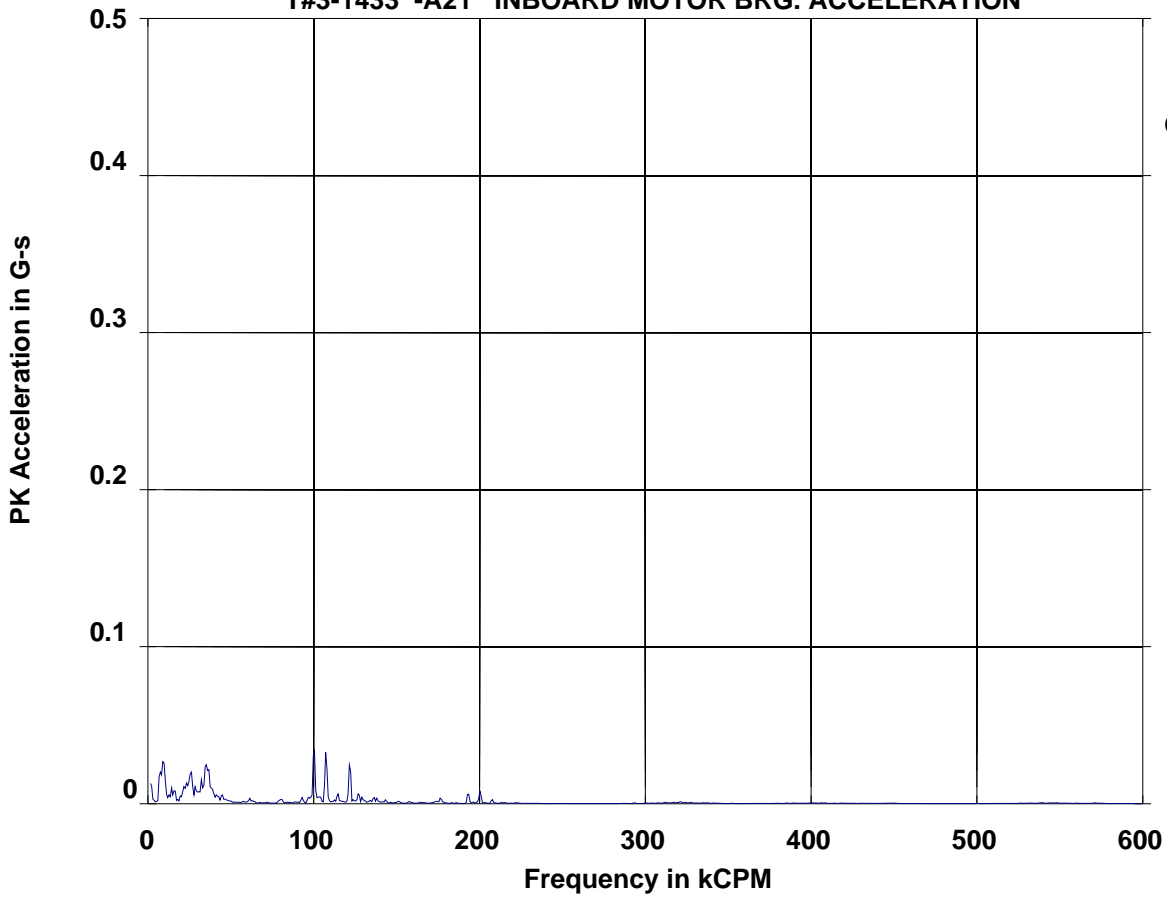
TOTAL MAG .3488
(ELECTRICAL= 0.00E+00/ 0%

SUBSYNCHRONOUS 0.0 / 0%

SYNCHRONOUS .1890 / 29%
FLOOR= .1901

NONSYNCHRONOUS .2932 / 71%
SPEC CREST= 2.04)

T#3 - Harris Co MUD #69
T#3-1433 -A21 INBOARD MOTOR BRG. ACCELERATION



Route Spectrum
13-AUG-08 11:54:54
OVRALL= .0977 A-DG
PK = .0979
LOAD = 100.0
RPM = 1800.
RPS = 30.00

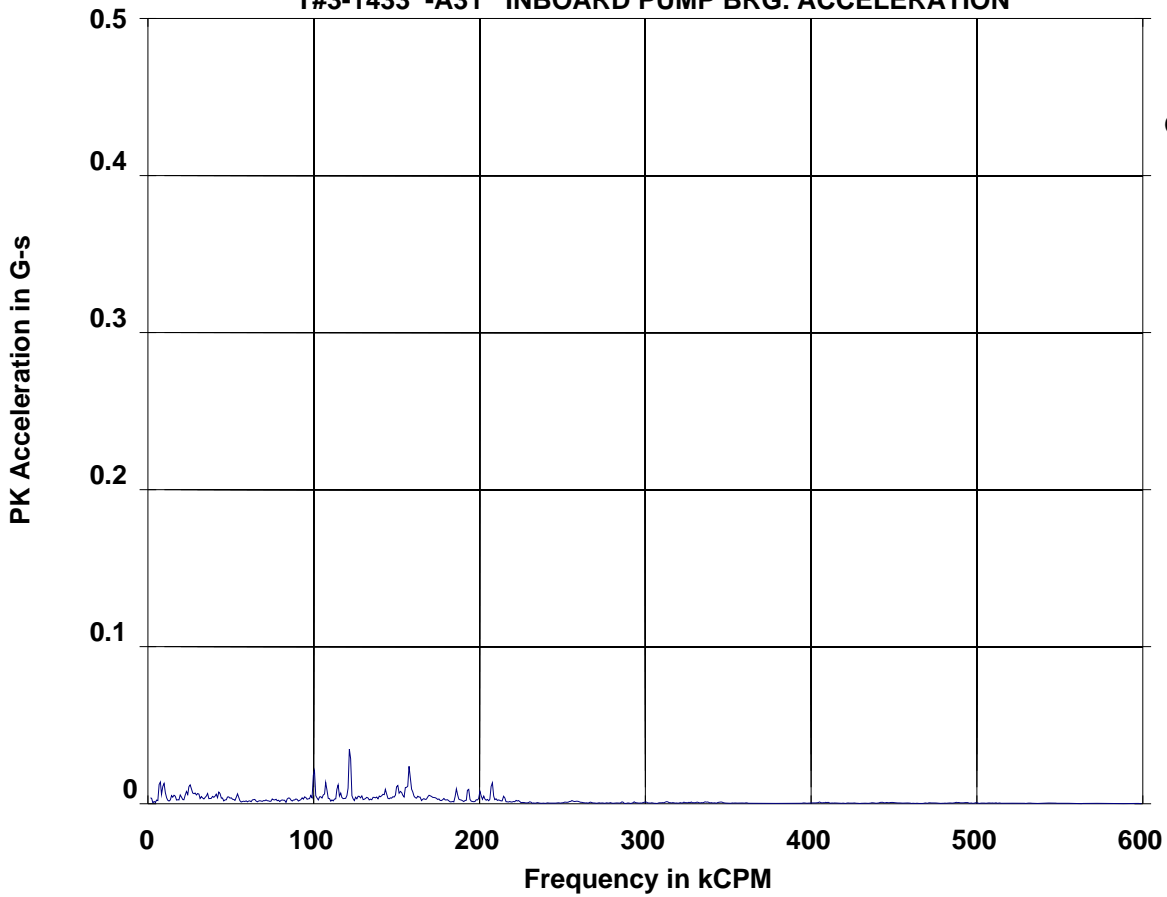
LIST OF SPECTRAL PEAKS

Machine: (T#3) Harris Co MUD #69
Meas. Point: T#3-1433 -A21 --> INBOARD MOTOR BRG. ACCELERATION
Date/Time: 13-AUG-08 11:54:54 RPM= 1800. Units=G-s PK

PEAK NO.	FREQUENCY (kCPM)	PEAK VALUE	ORDER VALUE	PEAK NO.	FREQUENCY (kCPM)	PEAK VALUE	ORDER VALUE
1	7.820	.0227	4.344	13	34.903	.0286	19.390
2	9.357	.0310	5.198	14	36.388	.0253	20.216
3	12.987	.0061	7.215	15	41.521	.0063	23.067
4	14.304	.0101	7.947	16	44.663	.0064	24.813
5	16.110	.0096	8.950	17	100.176	.0380	55.653
6	19.822	.0056	11.012	18	103.500	.0060	57.500
7	22.067	.0122	12.259	19	107.410	.0338	59.672
8	23.546	.0146	13.081	20	114.542	.0065	63.634
9	25.915	.0230	14.397	21	121.770	.0269	67.650
10	28.718	.0115	15.954	22	127.049	.0070	70.583
11	31.113	.0090	17.285	23	193.149	.0070	107.305
12	32.396	.0157	17.998	24	200.339	.0081	111.299

TOTAL MAG .0905
(ELECTRICAL= 0.00E+00/ 0%
SUBSYNCHRONOUS 0.0 / 0%
SYNCHRONOUS .0166 / 3%
FLOOR= .0314
NONSYNCHRONOUS .0889 / 97%
SPEC CREST= 2.57)

**T#3 - Harris Co MUD #69
T#3-1433 -A31 INBOARD PUMP BRG. ACCELERATION**



**Route Spectrum
13-AUG-08 11:55:04**

**OVRALL= .0830 A-DG
PK = .0831
LOAD = 100.0
RPM = 1800.
RPS = 30.00**

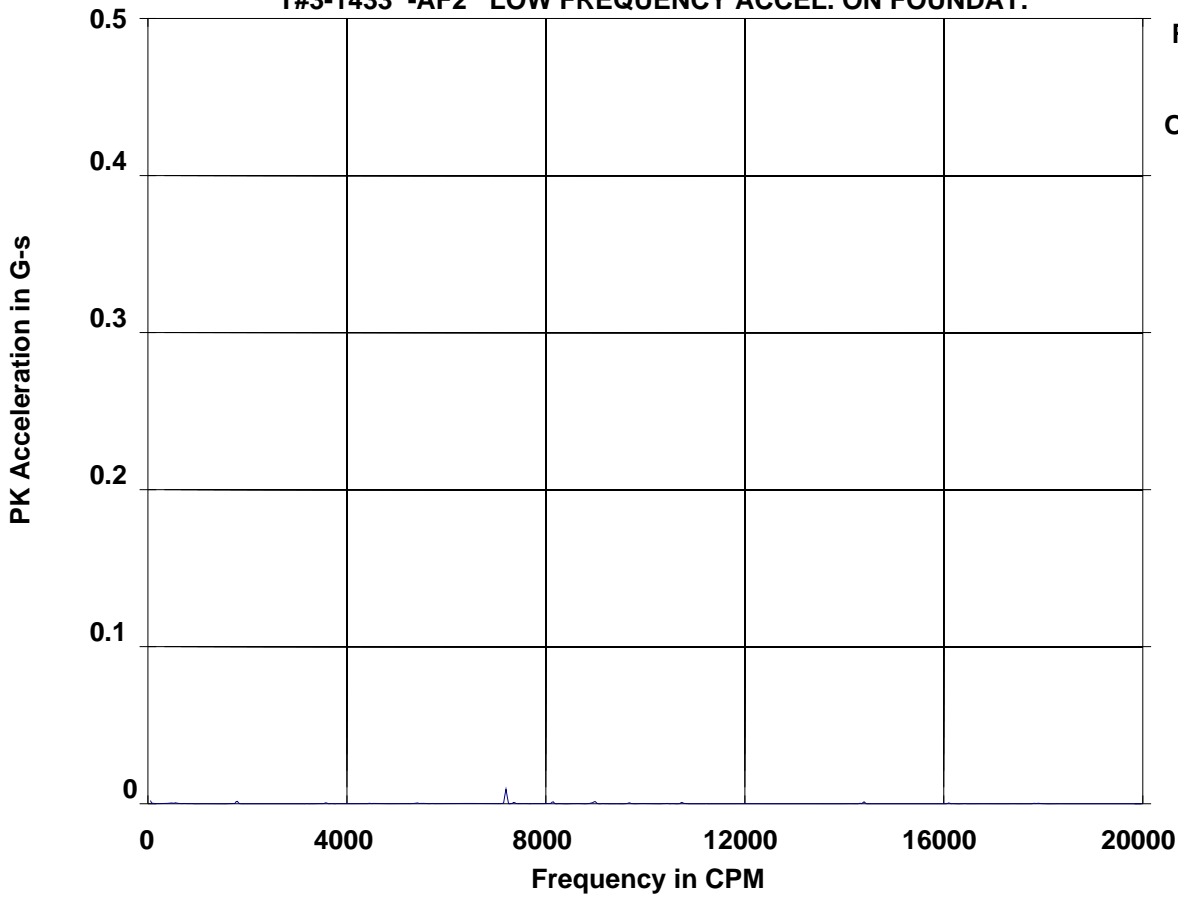
LIST OF SPECTRAL PEAKS

Machine: (T#3) Harris Co MUD #69
Meas. Point: T#3-1433 -A31 --> INBOARD PUMP BRG. ACCELERATION
Date/Time: 13-AUG-08 11:55:04 RPM= 1800. Units=G-s PK

PEAK NO.	FREQUENCY (kCPM)	PEAK VALUE	ORDER VALUE	PEAK NO.	FREQUENCY (kCPM)	PEAK VALUE	ORDER VALUE
1	7.192	.0154	3.995	13	114.526	.0127	63.626
2	9.464	.0142	5.258	14	116.053	.0071	64.474
3	23.471	.0083	13.039	15	121.768	.0377	67.649
4	25.182	.0135	13.990	16	142.109	.0070	78.949
5	28.158	.0078	15.643	17	143.410	.0094	79.672
6	30.337	.0075	16.854	18	150.416	.0133	83.564
7	35.793	.0069	19.885	19	152.574	.0089	84.763
8	41.005	.0066	22.781	20	157.673	.0247	87.596
9	43.041	.0082	23.912	21	186.124	.0096	103.402
10	54.156	.0065	30.086	22	193.163	.0104	107.313
11	100.204	.0233	55.669	23	200.368	.0081	111.316
12	107.384	.0138	59.658	24	207.482	.0145	115.268

TOTAL MAG	SUBSYNCHRONOUS	SYNCHRONOUS	NONSYNCHRONOUS
.0697	0.0 / 0%	.0213 / 9%	.0663 / 91%
(ELECTRICAL=	0.00E+00/ 0%	FLOOR= .0402	SPEC CREST= 2.20)

**T#3 - Harris Co MUD #69
T#3-1433 -AF2 LOW FREQUENCY ACCEL. ON FOUNDAT.**



**Route Spectrum
13-AUG-08 11:55:12**

**OVRALL= .0103 A-DG
PK = .0103
LOAD = 100.0
RPM = 1780.
RPS = 29.67**

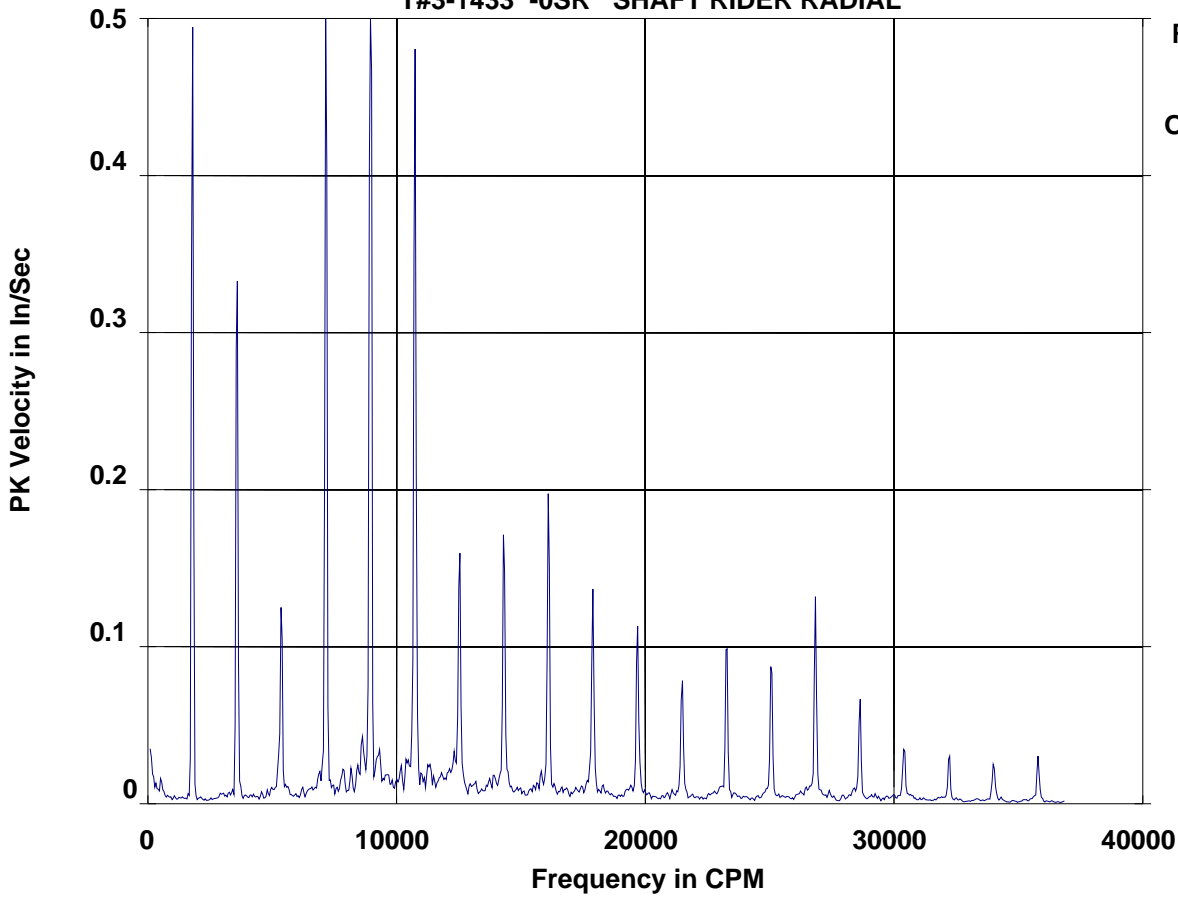
LIST OF SPECTRAL PEAKS

Machine: (T#3) Harris Co MUD #69
Meas. Point: T#3-1433 -AF2 --> LOW FREQUENCY ACCEL. ON FOUNDAT.
Date/Time: 13-AUG-08 11:55:12 RPM= 1780. Units=G-s PK

PEAK NO.	FREQUENCY (CPM)	PEAK VALUE	ORDER VALUE	PEAK NO.	FREQUENCY (CPM)	PEAK VALUE	ORDER VALUE
1	342.3	3.24E-04	.192	13	6933.1	2.76E-04	3.895
2	482.4	.0006	.271	14	7198.2	.0093	4.044
3	560.0	.0007	.315	15	7361.4	.0009	4.136
4	1789.2	.0018	1.005	16	8140.2	.0013	4.573
5	3578.9	.0007	2.011	17	8986.6	.0016	5.049
6	4457.0	2.81E-04	2.504	18	9677.8	.0006	5.437
7	5409.9	.0006	3.039	19	10734.9	.0009	6.031
8	5508.9	2.92E-04	3.095	20	14315.2	2.77E-04	8.043
9	6107.8	2.71E-04	3.431	21	14396.6	.0013	8.088
10	6183.6	2.97E-04	3.474	22	16102.4	4.77E-04	9.047
11	6213.0	2.77E-04	3.491	23	17818.2	2.62E-04	10.011
12	6431.0	3.01E-04	3.613	24	17891.6	3.19E-04	10.052

TOTAL MAG	SUBSYNCHRONOUS	SYNCHRONOUS	NONSYNCHRONOUS
.0100	.0010 / 1%	.0019 / 4%	.0028 / 8%
(ELECTRICAL=	.0093 / 88%	FLOOR= .0017	SPEC CREST= 1.11)

**T#3 - Harris Co MUD #69
T#3-1433 -OSR SHAFT RIDER RADIAL**



**Route Spectrum
13-AUG-08 11:55:32**

**OVRALL= 1.43 V-DG
PK = 1.43
LOAD = 100.0
RPM = 1800.
RPS = 30.00**

LIST OF SPECTRAL PEAKS

Machine: (T#3) Harris Co MUD #69
Meas. Point: T#3-1433 -OSR --> SHAFT RIDER RADIAL
Date/Time: 13-AUG-08 11:55:32 RPM= 1800. Units=In/Sec PK

PEAK NO.	FREQUENCY (CPM)	PEAK VALUE	ORDER VALUE	PEAK NO.	FREQUENCY (CPM)	PEAK VALUE	ORDER VALUE
1	1789.0	.5083	.994	13	14314.4	.1894	7.952
2	3578.8	.3689	1.988	14	16108.4	.2089	8.949
3	5366.6	.1367	2.981	15	17884.9	.1398	9.936
4	7160.4	.5869	3.978	16	19676.6	.1217	10.931
5	8605.4	.0475	4.781	17	21473.4	.0858	11.930
6	8950.2	.8375	4.972	18	23266.2	.1159	12.926
7	9296.4	.0387	5.165	19	25062.9	.1006	13.924
8	10396.3	.0320	5.776	20	26832.9	.1340	14.907
9	10448.1	.0318	5.805	21	28624.2	.0710	15.902
10	10733.1	.5027	5.963	22	30412.5	.0398	16.896
11	12329.8	.0363	6.850	23	32215.1	.0346	17.897
12	12525.7	.1764	6.959	24	35779.3	.0309	19.877

TOTAL MAG	SUBSYNCHRONOUS	SYNCHRONOUS	NONSYNCHRONOUS
1.3861	0.0 / 0%	.7589 / 30%	1.1599 / 70%
(ELECTRICAL=	0.00E+00/ 0%	FLOOR= .1819	SPEC CREST= 1.90)