1985 RE-EVALUATION

OF

STEAM GENERATOR INSPECTION INTERVAL

SAN ONOFRE NUCLEAR GENERATING STATION

UNIT 1

MARCH 1985

SOUTHERN CALIFORNIA EDISON COMPANY

ANA, Inc.

1985 RE-EVALUATION

OF

STEAM GENERATOR INSPECTION INTERVAL

SAN ONOFRE NUCLEAR GENERATING STATION

UNIT 1

MARCH 1985

PREPARED FOR: SOUTHERN CALIFORNIA EDISON COMPANY

PREPARED BY: ALLEN NUCLEAR ASSOCIATES
SAN CLEMENTE, CALIFORNIA

TABLE OF CONTENTS

SECTIONS

APPENDICES

1. Introduction

On September 4, 1984, the San Onofre Unit 1 Provisional Operating License (POL) DPR-13 was amended to revise Condition 3.E which requires that a steam generator inspection be performed within 6 equivalent full power months (EFPM) of operation from startup following the 1982 to 1984 backfit outage. The objective of this required inspection is to monitor the condition of the non-sleeved steam generator tubes at San Onofre Unit 1. The time interval for this interim inspection was based upon assigning to the non-sleeved tubes the conservatively estimated intergranular attack (IGA) degradation rate of 15% per year of operation. This previously established 15% per year degradation rate was based on comparison of historical eddy current data from tubes that were within active regions of steam generator A and were also sleeved during the 1980 Sleeving Repair Project. The purpose of this report is to provide information upon which to establish a revised degradation rate applicable to non-sleeved tubes which more appropriately reflects the rate of progression of IGA among these tubes. The appropriate interval between inspections can then be established, based upon this revised degradation rate.

The revised degradation rate was determined based upon a review of historical eddy current examination data for non-sleeved tubes. Using this data, signals at the top of the tubesheet that are indicative of IGA were re-evaluated. The characteristics of eddy current signals in these non-sleeved tubes, over several inspection intervals, were then compared and contrasted with signals over similar inspection intervals in sleeved tubes which are known to have undergone active degradation due to IGA. From such a comparison, an assessment of IGA progression rate was made for the relatively inactive regions and a revised value for non-sleeved tube degradation rate was established.

Such an assessment relies a) on the capability of eddy current techniques to detect IGA as found at San Onofre Unit 1, and b) on the ability to correlate the threshold of detectability with IGA depth of penetration. To this end, the in-situ eddy current responses of tubes, subsequently pulled from steam generators A and C during the 1980 Sleeving Repair Project, were re-evaluated and compared to the metallurgical results as reported in the 1981 Return to Power Report (Reference 1).

Verification of the assessment of IGA progression in non-sleeved tubes is obtained through the results of eddy current examinations conducted in 1982, following approximately 4.3 EFPM of operation (see Reference 2), and in 1984, following an extended shutdown to perform plant modifications.

Assurance of the continuing validity of the assigned value of degradation rate is supported by a review of the steam generator water chemistry history and controls subsequent to the 1980 Sleeving Repair Project. This review indicates that conditions which could accelerate IGA progression in non-sleeved tubes are unlikely to occur.

Section 2 of this report contains relevant background information on plant operating history, steam generator water chemistry, eddy current examinations, and the 1980 Sleeving Repair Project. This Section also presents the methodology used to re-evaluate the steam generator inspection interval.

Section 3 contains information that confirms the detectability of IGA at San Onofre Unit 1.

Section 4 contains the assessment of IGA progression rate based on review and comparison of eddy current data over a number of inspection intervals for both non-sleeved and sleeved tubes.

Section 5 presents the conclusions in regard to the assessment of IGA progression rate in non-sleeved tubes, discusses the development of a revised degradation rate (10% per 15 EFPM) for the non-sleeved tubes, and presents the proposed interval for future inspections at San Onofre Unit 1.

Section 6 contains the list of references cited in this report.

2. Background and Re-evaluation Methodology

a. General

During the 1980-81 Sleeving Repair Project, it was established that IGA had occured at the top of the tubesheet in the hot legs of San Onofre Unit 1 steam generators A, B, and C. The regions of aggressive attack were identified by eddy current testing and were corroborated by metallurgical examination of pulled tubes. Although the affected regions of all three steam generators were similar, steam generator A recorded the largest number of quantifiable eddy current indications, followed by C and then B which had the least number of affected tubes.

Figure 2-1 shows the distribution in steam generator A of quantifiable indications based on multi-frequency, differential bobbin coil data collected in 1980 prior to sleeving. The location of affected tubes is similar among the three steam generators. Figure 2-2 shows the locations of tubes which were removed from S/G's A and C for examination and the corresponding maximum depths of IGA penetration as determined by metallography.

Using eddy current test data and results of metallurgical examinations of pulled tubes to identify the active regions of IGA within each steam generator, boundaries were then formulated which encompassed these regions and all tubes within the boundary for each steam generator were sleeved. Figure 2-1 also shows the sleeving boundary for S/G A which is representative of the boundaries for all three S/G's. The regions outside the sleeving boundaries contain non-sleeved tubes. These tubes were not sleeved because analysis of eddy current data collected during the sleeving project yielded no quantifiable indications of IGA at the top the tubesheet.

The conditions for return to power of San Onofre Unit 1 following the 1980 Sleeving Repair Project are set forth in Section 3 of the April, 1981 Return to Power Report (Reference 1). The limiting condition of a 6 EFPM operating interval was based on the 15% per year degradation rate which was conservatively applied to the non-sleeved tubes.

In summary, a rate of 15% per year was assumed to apply to these tubes with the added assumption that the depth of IGA penetration could be up to 40% before becoming detectable by eddy current techniques. Under these assumptions, an operating interval of 6 EFPM would limit non-sleeved tube degradation to less than 48% at the first inspection following post-sleeving return to power. This degradation level would, in turn, be less than the plugging limit of 50% for non-sleeved tubes.

The assumed degradation rate for non-sleeved tubes is characterized as being conservative in the 1981 Return to Power Report since (1) the rate was derived from tubes inside the sleeving boundary having quantifiable, unambiguous eddy current indications of IGA and (2) the time frame over which IGA was assumed to have progressed from threshold detection levels to quantifiable depth was conservatively limited to the period 1976 to 1980. Additional information on the basis for the currently assumed degradation rate is contained in Section 2.b below.

The assumption that non-sleeved peripheral tubes have IGA depths near the detectability level of 40% is also a conservativism in the formulation of the operating interval. Eddy current examination results from the 1982 and 1984 steam generator inspections indicate, further, that this assumption, when considered with an assumed degradation rate of 15% per year, is overly conservative. These inspections showed negligible progression of IGA in the non-sleeved tubes following approximately 4.3 EFPM of operation and 26 months in lay-up conditions. Were the 15% degradation rate applicable to non-sleeved tubes and were the depth of IGA at the 40% level at the time of the sleeving project, then evidence of progression of IGA in non-sleeved tubes would have been evident in the eddy current examination data. Additional information on the scope and findings of the 1982 and 1984 inspections is provided in Section 2.c below.

The apparent lack of significant progression of IGA in non-sleeved tubes is suppported by the improvement in steam generator water chemistry specifications which have been in place since the sleeving repairs were implemented. An overview of steam generator chemistry prior to and subsequent to the sleeving repair project is given in Section 2.d below.

The above considerations provided the incentive to re-evaluate the degradation rate in non-sleeved tubes for the purpose of establishing a more appropriate operating interval between steam generator inspections. Accordingly, a re-evaluation of the non-sleeved tube degradation rate and steam generator interval was performed as outlined in Section 2.e below.

b. <u>Basis for 1981 Degradation Rate</u>

The degradation rate applied to non-sleeved tubes prior to return to power in 1981 was developed based on the eddy current responses of 39 tubes in S/G A, located in active regions within the sleeving boundary. The locations of these tubes are shown on Figure 2-1. The reference data base was the 1980 multi-frequency, differential bobbin coil data. Section 3.1 of the 1981 Return to Power report describes the methodology used in deriving the 1981 degradation rate for these tubes. In connection with preparation of this 1985 report, the 1980 and prior eddy current data on these tubes were independently reviewed. Appendix A contains representative signatures from among the 39 tubes having the most complete examination histories. It is apparent from these signatures that the 39 tubes are within areas which have experienced active, significant degradation over time. No tube in the group exhibits a normal tube sheet entry signal throughout its inspection history which, in many cases, dates back to 1973. Many tubes in the active regions surrounding the 39 tubes exhibit the same characteristics.

In comparing the eddy current signatures of the 39 tubes from one inspection to the next, it does not appear that the rate of degradation during any one interval is significantly different than during another interval. In an attempt to verify this qualitative judgement, phase angles and corresponding depths were assigned as appropriate to all available signatures at the top of the tube sheet from the 39 tubes. In those cases where it was inappropriate to assign phase angles, but the signal was distorted, a depth of 40% was assigned as being representative of the threshold of detectability of volumetric IGA. The results are presented in Table 2-1. The trends on a tube by tube basis are generally consistent with the view that a degradation process commenced prior to 1973 and that degradation progressed through 1980. At low depths of penetration, however, there is considerable scatter in the re-evaluated data which makes reliable estimation of degradation rates based on group statistics for early inspection intervals uncertain. Among the factors which contribute to this uncertainty are the following:

(1) Denting in combination with thinning at the top of the tubesheet act to distort and oppose the formation of the flaw response of the differential coil at lower depths of IGA. The typical effect is to foreshorten and/or distort the upper lobe of the differential response, creating uncertainty in assignment of the proper phase angle.

(2) The use of 400 kHz as the test frequency for .055" wall thickness Inconel 600 tubing results in low depth flaws being rotated more toward the hoizontal plane and increases the masking effect of noise and dents on the coil response to IGA.

Notwithstanding the problem of reliable quantification at the lower depths of IGA, it is evident that for tubes in the active regions, IGA progresses at a significant rate, is detected in earlier inspections, and significantly alters the eddy current coil response in subsequent years.

c. <u>1982 and 84 Inspection Results</u>

In 1982 following approximately 4.3 EFPM of operation after the 1981 Sleeving Repair Project, a comprehensive eddy current examination of sleeved and non-sleeved tubes was performed in all three steam generators. In the non-sleeved region, tubes were examined with both the 4x4 and bobbin coil probes. A total of 1212 tubes in all three steam generators were examined consistent with the pattern for steam generator A in Figure 2-3. The results were reported in the 1982 Return to Power Report and showed negligible change in progression of IGA in non-sleeved tubes. The seven tubes in S/G C and one tube in S/G A which showed evidence of minor change were located at the sleeving boundary near previously defined active regions. Moreover, the depth of IGA penetration was not such that the differential bobbin response was quantifiable.

In April of 1984, following approximately 26 months in lay-up conditions, the steam generators were again inspected in preparation for return to power scheduled for later 1984. Steam generator A was selected for inspection and both sleeved and non-sleeved tubes were eddy current examined. Approximately 226 non-sleeved tubes adjacent to the sleeving bondary were examined using the 4x4 probe in accordance with the inspection pattern shown in Figure 2-4. Results showed no evidence of IGA progression.

d. Overview of Steam Generator Water Chemistry

(1) Pre-Sleeving History

San Onofre Unit 1 has operated on phosphate chemistry since initial operation in 1968 except for a period of approximately four months from December 1970 until April 1971 during which time volatile treatment was attempted. Due to hideout return and condenser leakage, excessive blowdown was required in order to maintain proper chemistry and, therefore, phosphate treatment was resumed. The chemistry history from that time up to the 1980 sleeving repair outage is discussed in Appendix A of the 1981 Return to Power Report (Reference 1).

(2) Post-Sleeving History

On June 17, 1981, the Unit 1 returned to service following the steam generator sleeving repair. A revised chemistry program was followed. This program included (a) a cold soak, (b) a hot soak, (c) new chemistry control parameters during heat-up, and (d) new chemistry control parameters during power escalation and steady state operation.

During the ensuing 4.3 EFPM of operation, there were three occassions in which the secondary water chloride limit of of 0.5 ppm was exceeded. On one occassion, the chloride level exceeded 5 ppm due to a condenser leak and the unit load was reduced to 30% to limit chloride hideout. The condenser was repaired and normal chloride levels restored within fourteen hours using blowdown. The other two occasions involved lesser chloride excursions of shorter duration without need for load reduction.

Phosphate concentrations during the 4.3 EFPM operating interval were out of specification on four occasions. At no time did this condition persist more than four hours. The proper phosphate concentrations were restored by blowdown and/or chemical feed.

On February 27, 1982, Unit 1 was shut down for a scheduled steam generator sleeving repair inspection. During the 4.3 EFPM of operation, it is considered that overall steam generator chemistry was significantly improved in comparison to pre-1981 operating history.

From February 27, 1982 through November 27, 1984, the steam generators were maintained in wet layup while in a Mode 5 extended cold shutdown. The secondary chemistry limits for this condition are specified as follows:

Phosphate	=<50 ppm
Chloride	=< 1 ppm
Na/PO4	1.0 - 3.0
pH	9.3 - 10.5
Hydrazine	50 - 150 ppm

Periodic drain and refill operations were necessary to maintain these limits as sodium, phosphate and chloride leached from the sludge pile into solution. The need to drain and refill became less frequent as the outage progressed due to a decrease in the rate at which sodium, phosphate, and chloride entered into solution. Draindown was also required in order to perform steam generator secondary side inspections.

A nitrogen blanket was maintained on the steam generators during the outage to minimize oxygen ingress.

In November, 1984, Unit 1 was returned to service. Mode 1 steam generator chemistry limits are as follows:

Phosphate	15 - 30 ppm
Chloride	=< 500 ppb (typically < 100 ppb)
Na/PO4	2.3 - 2.6
pH	9.4 - 10.2

Also, continuous blowdown of approximately 1 % is being maintained to assist in steam generator chemistry control. Since the November, 1984 return to service, no primary to secondary leakage has been detected at Unit 1.

In early 1983, a new water chemistry procedure was implemented at Unit 1. The procedure, entitled "Unit 1 Steam Generator and Condensate/Feedwater Chemistry Control and Sampling Frequencies", defines normal and abnormal ranges of secondary water chemistry parameters and sampling frequencies for each of the plant operating modes, including lay-up periods. The administrative and management controls of the procedure are consistent with the guidance of "PWR Secondary Water Chemistry Guidelines", EPRI Report NP-2704-SR dated October, 1982. The response to out of range parameters include mitigating actions, power reduction to 30% or less, and unit shutdown if site management determines that continued operation could adversely affect steam generator tube integrity. In all cases, site management is responsible for and has taken action to reduce power based upon the recommendations of the plant chemistry department.

e. Re-evaluation of Steam Generator Inspection Interval

The application to non-sleeved tubes of a degradation rate based on data from tubes in the active regions is judged to be overly conservative since (1) the non-sleeved tubes are in an "inactive" region, (2) the 1982 and 1984 inspection results confirm that there is no significant progression of IGA in non-sleeved tubes, and (3) current steam generator water chemistry controls provide assurance of continuing "inactivity". The practical consequence of applying this conservative rate is to require unscheduled unit shutdowns during the cycles of operation between refuelings. Approximately four weeks are needed to perform the evolution of cold shutdown, steam generator inspection, analysis of results, reporting of findings, and return to power. To the extent that such evolutions occur more frequently than necessary, otherwise avoidable plant operating costs and personnel radiation exposure are incurred without benefit. Accordingly, a re-evaluation of the basis for the currently required steam generator inspection interval is warranted in order to justify an interval which more appropriately reflects the condition of the non-sleeved tubes and is adequately conservative, but is not overly restrictive.

The approach adopted in this re-evaluation relied on the existing eddy current data base to assess the rate of progression of IGA in non-sleeved tubes and to assign a degradation rate which reflects the actual rate of progression and at the same time is adequately conservative.

The reference inspection for assessing the progression of IGA is the 1980 inspection which lead to the sleeving repair effort. In that inspection, 100% of the tubes were inspected on the hot leg side below the fourth support in each steam generator using the multi-frequency bobbin coil. The test frequencies employed included 400 kHz, 340 kHz and 100 kHz differential and 100 kHz absolute.

In order to utilize the most extensive eddy current data base, steam generator A was selected for performing the assessment. The use of steam generator A in performing this assessment is justified on the basis that all three steam generators are performing in a like manner. Accordingly, the resultant, revised degradation rate can be applied to all three steam generators.

Inspections prior to 1980 were performed using single frequency bobbin coil at 400 kHz differential. Therefore, for the purpose of comparative analysis of eddy current data, pre-1980 data is compared to the 400 kHz differential 1980 data. For comparison and evaluation of 1980 and subsequent inspection data, all channels of eddy current data are evaluated.

To confirm the capability of the bobbin coil to detect IGA as experienced at San Onofre Unit 1, the field eddy current data in 1980 for tubes pulled from S/G's A and C was compared to the metallurgical findings for these tubes. The detectability is measured by the depth of IGA above which there is reasonable assurance of obtaining a bobbin coil response.

A review of historical data for tubes in the active regions having discretely quantifiable, unambiguous eddy current signals in 1980 establishes the time frame over which conditions supporting IGA have been present. Tubes in the non-sleeved regions, which have at most a distorted signal indicative of IGA in 1980, can be assumed to have a depth of IGA penetration at or near the threshold of detectability. By assuming no IGA in these tubes at the start of the time frame established for tubes in the active regions, a conservative IGA degradation rate can be derived and assigned to the non-sleeved tubes.

The results of the 1982 and 1984 examinations provide confidence that the derived degradation rate is adequately conservative. The improvements in steam generator chemistry procedures and controls implemented since sleeving provide assurance that conditions which could accelerate IGA progression in non-sleeved tubes have not occured since 1981 and are unlikely to occur during future operation.

The sections which follow present the results of the re-evaluation effort based on the preceding approach and present the revised degradation rate established for non-sleeved tubes and the corresponding appropriate operating interval between steam generator inspections.

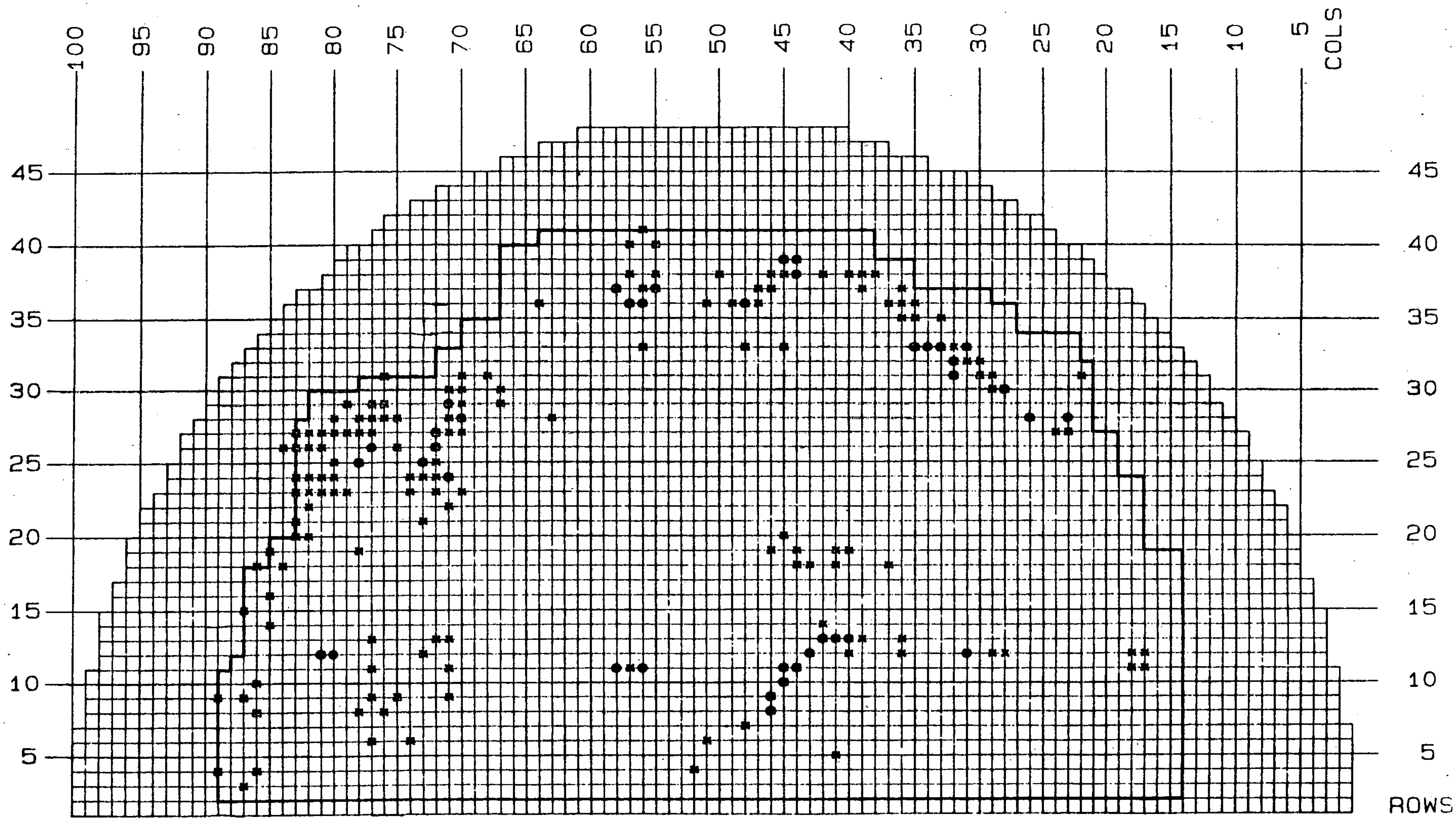
TABLE 2-1
RE-EVALUATION OF 1981 DEGRADATION RATE DATA

TUBE NO.		% DEPTH IN YEAR INSPECTED					
ROW	COL	80	79	77	76	75	73
28	23	74			61		
28	26	99		75	40		
30	28	98		92			
12	31	86					54
33	31	89		96			40
31	32	91		81		70	
32	32	96		66			
33	33	95					
33	34	93					40
33	35	91					81
13	40	96		89	65	40	
13	41	92	86	62		39	28
13	42	77	73	51		24	
12	43	77	67			46	
11	44	91	88			36	
38	44	77					
39	44	91					
10	45	87				90	
11	45	79	65			36	
39	45	80					
8	46	90					
9	46	79					
36	48	82					
37	55	83			70		
11	56						
36	56	86			29		
36	57	80	62		48		
11	58	94					
37	58	76			19		
28	70	98					55
24	71	95					
29	71	98		50			40
26	72	87		62			71
27	72	97		71			55
25	73	98		96			65
26	77	84					63
25	78	79					40
12	80	91		95			79
12	81	96		98			75
MEAN DEPTH OF TUBES RE-EVALUATED	=	88.2	73.5	77.4	47.4	47.6	56.1

FIGURE 2-1

SAN ONOFRE UNIT 1 S/G 'A'

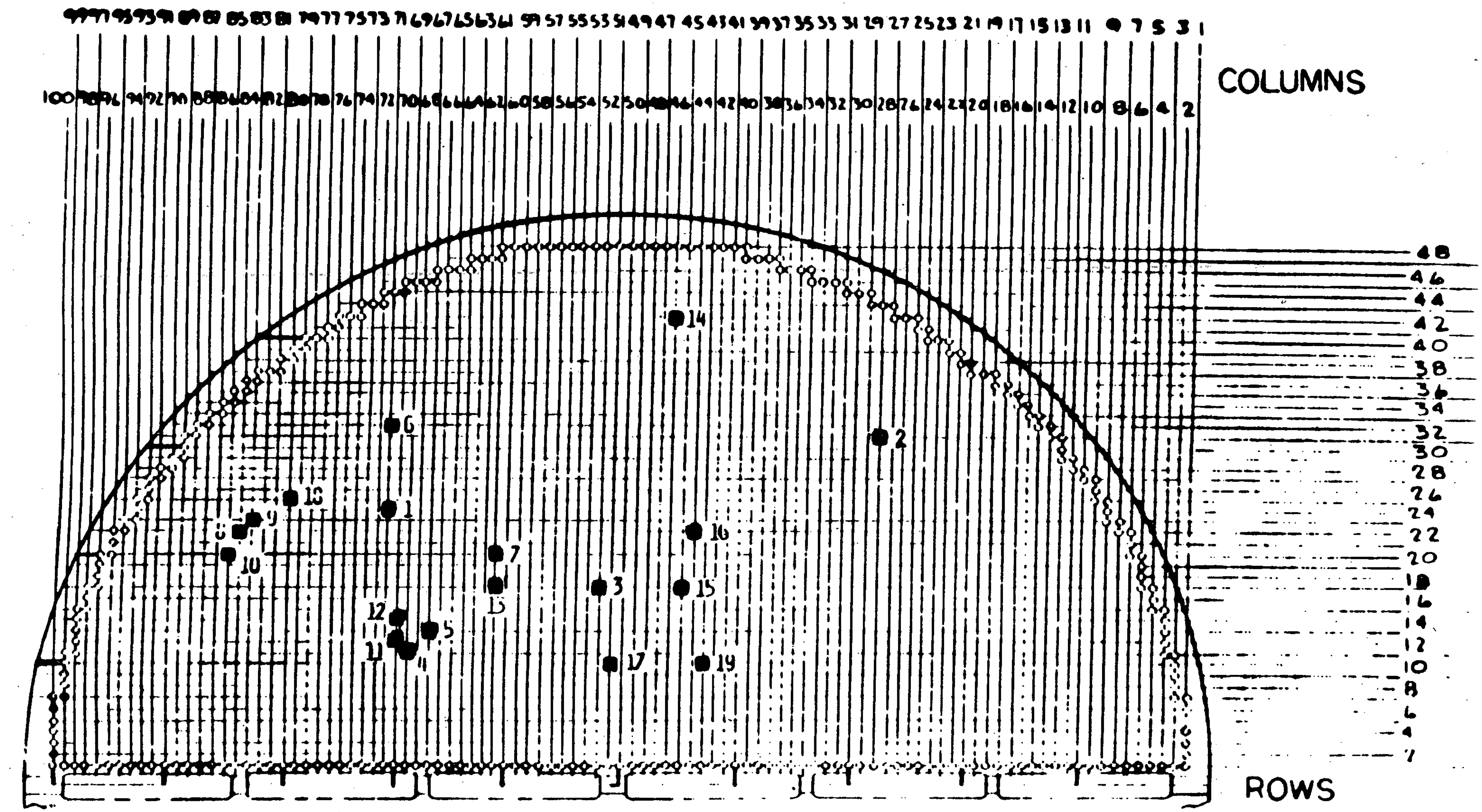
HOT LEG ELEVATION: TUBESHEET REPORT DATE: MARCH '85



<--- MANWAY —— = 'A' SLEEVING BOUNDARY NOZZLE --->

x = '85 RE-EVALUATION: TUBES WITH IGA INDICATIONS ● = 39 TUBES USED TO ESTABLISH '81 IGA RATE

FIGURE 2-2

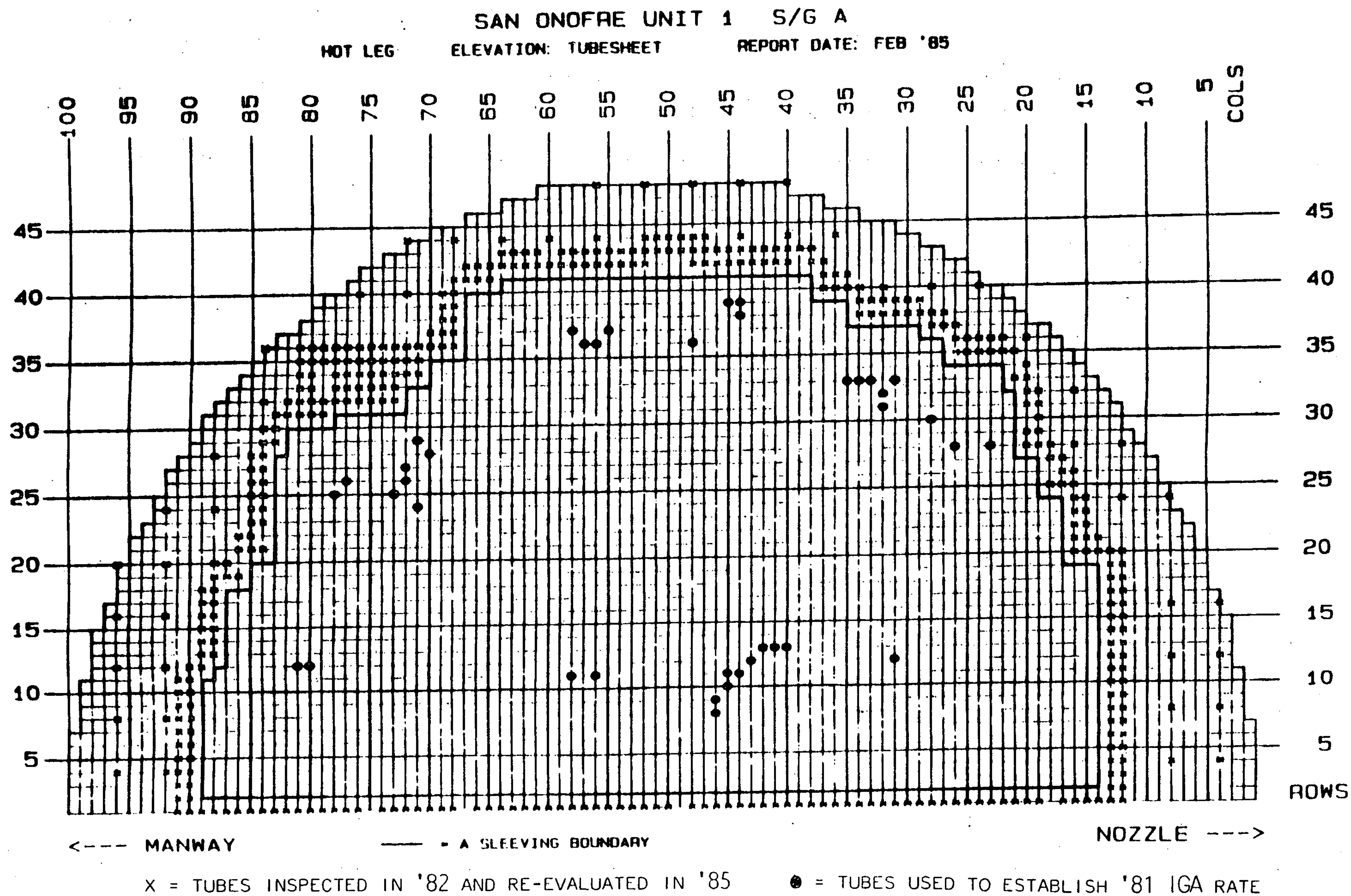


NOTE: SG(R-C)

1. A(24-71) 95%
2. A(31-28) 90%
3. A(17-52) 100%
4. C(11-69) 68%
5. C(13-67) 78%
6. C(32-71) 35%
7. A(20-60) 0
8. A(22-84) 20%
9. A(23-83) 20%
10. A(20-85) 80%
11. A(12-70) 50%
12. C(11-70) 30%
13. A(17-61) 90%
14. A(41-46) 17%
15. C(17-45) 60%
16. C(22-44) 25%
17. C(10-51) NO METALLURGY
18. C(25-80) 40%
19. C(10-43) NO METALLURGY

Tubes Removed from San Onofre Steam Generators for Examination

FIGURE 2-3


SAN ONOFRE UNIT 1 S/G A
HOT LEG ELEVATION: TUBESHEET REPORT DATE: FEB '85
COLS
ROWS
<--- MANWAY
NOZZLE --->
——— = A SLEEVING BOUNDARY
X = TUBES INSPECTED IN '82 AND RE-EVALUATED IN '85
● = TUBES USED TO ESTABLISH '81 IGA RATE

SCE-A HOT LEG 4X4 INSPECTION PROGRAM, APRIL 1984

20-APR-84 15:11:21

X = INSPECT THROUGH
TOP OF TUBESHEET
WITH 4X4 PROBE
TUBES TO INSPECT - 226

SERIES 27

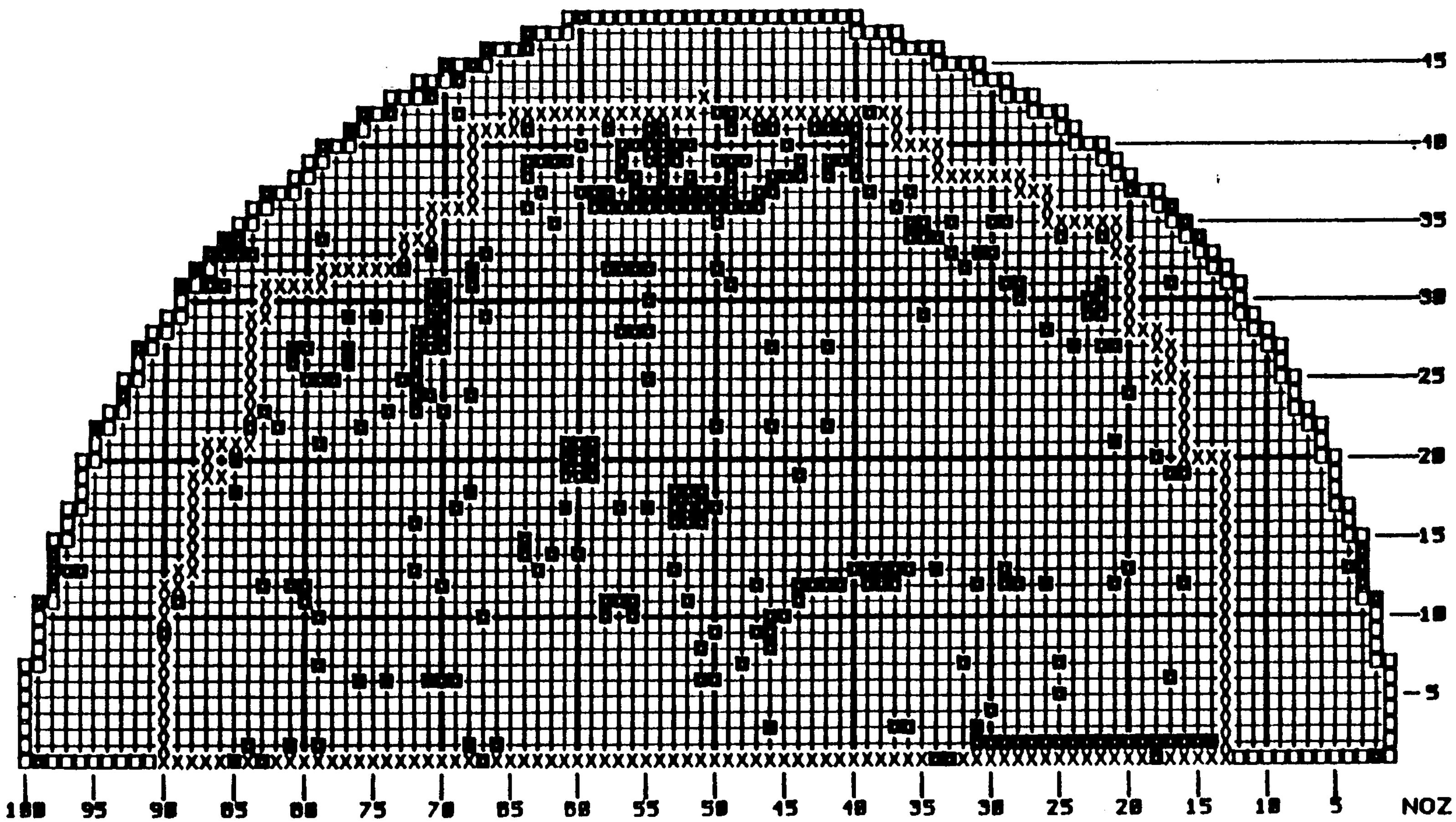


FIGURE 2-4

3. Correlation of Eddy Current and Pulled Tube Data

The purpose of this Section is to confirm the ability of the bobbin coil probe to detect the IGA which has occured at San Onofre Unit 1. The methodology correlates the results of the 1980 pulled tube metallurgical examination with the re-evaluated field eddy current data.

Tube lengths were removed from hot leg sides of steam generators A and C during the Sleeving Repair Project. The field eddy current data collected from these tubes prior to removal have been re-evaluated and compared to the metallurgical examination results as reported in Table 2.2-7 of the 1981 Return to Power Report. Table 3-1 summarizes the results of this comparison. Appendix B contains computer printouts of the field eddy current responses for the pulled tubes.

The results show that in all cases the 100 kHz absolute bobbin coil detects the IGA condition reported by the metallurgical examination. The results further indicate that the 400 kHz differential bobbin exhibits a response to the IGA condition in the majority of cases where the metallurgical examination shows an IGA depth of >40%. An exception is Row 17 Col 45, for which there is essentially no response to the IGA which extends approximately 2 inches axially above the tube sheet. The lack of the differential coil response to this condition is explained by the similarity to a thinned condition. It is noted again that the 100 kHz absolute does respond to the IGA in Row 17 Col 45.

In summary, based on correlation of bobbin coil responses with pulled tube metallurgical examination results, it is concluded that the bobbin coil can detect IGA, as found at San Onofre Unit 1, at levels exceeding 20%. Specifically, the 400 kHz differential generally responds to IGA at levels in excess of 40% and the 100 kHz absolute detects IGA at levels exceeding 20%.

TABLE 3-1
RE-EVALUATION OF 1980 PULLED TUBE DATA

STEAM GEN'R	TUBE NO. ROW	TUBE NO. COL	PULLED CONDITION	1980 EVALUATION OF FIELD EDDY CURRENT	1985 RE-EVALUATION OF 1980 FIELD ECT DATA	1980 FRACTOGRAPHY AND METALLOGRAPHY
A	24	71	FRACTURED AT TTS	400 DIFF: 95% 100 ABS: ABNORMALITY NOTED	400 DIFF: 95% 100 ABS: 96%	95% CIRCUMFERENTIAL
A	31	28	FRACTURED AT TTS	400 DIFF: COMPLEX WITH DENT 100 ABS: ABNORMALITY NOTED	400 DIFF: 92% 100 ABS: 92%	90% CIRCUMFERENTIAL
A	17	52	INTACT	400 DIFF: 95% 4" BELOW TTS 100 ABS: 95% 4" BELOW TTS	400 DIFF: 95% 4" BELOW TTS 100 ABS: 48%	100% 3-4" BELOW TTS 50% 6" BELOW TTS
A	12	70	FRACTURED AT TTS	400 DIFF: DTS/DENT 100 ABS: ABNORMALITY NOTED RPC: <40&	400 DIFF: 31% 100 ABS: 34%	50% MAX
A (COLD LEG)	41	46	INTACT	400 DIFF: DTS 100 ABS: ABNORMALITY NOTED RPC: INDICATION	400 DIFF: DTS 100 ABS: ABNORMAL INDICATION	THINNING MAX 17%
A	22	84	INTACT	400 DIFF: SMALL DENT DTS 100 ABS: OK RPC: OK	400 DIFF: DENT WITH DTS 100 ABS: 22%	20% MAX AT TTS
A	23	83	INTACT	400 DIFF: DENT/DTS 100 ABS: OK RPC: ABNORMALITY	400 DIFF: 21% 100 ABS: 20%	20% MAX IN 90 MIL BAND AT TTS
A	17	61	INTACT	400 DIFF: SMALL DENT DTS 100 ABS: ABNORMALITY NOTED RPC: SMALL INDICATION	400 DIFF: 91% 100 ABS: 91%	90% BASED ON VISUAL
A	20	85	FRACTURED AT TTS	400 DIFF: DENT 100 ABS: DENT RPC: 38%	400 DIFF: DIST'D DENT AND TUBESHEET 100 ABS: 52%	80% MAX

TABLE 3-1
RE-EVALUATION OF 1980 PULLED TUBE DATA

STEAM GEN'R	TUBE NO. ROW	COL	PULLED CONDITION	1980 EVALUATION OF FIELD EDDY CURRENT	1985 RE-EVALUATION OF 1980 FIELD ECT DATA	1980 FRACTOGRAPHY AND METALLOGRAPHY
C	11	69	FRACTURED AT TTS	400 DIFF: LARGE DENT 100 ABS: DENT RPC: INDICATIONS	400 DIFF: DENT 100 ABS: 50%	>60% FOR 180 DEG 68% MAX
C	13	67	FRACTURED AT TTS	400 DIFF: DTS 100 ABS: ABNORMALITY NOTED RPC: INDICATIONS	400 DIFF: DIST'D DENT 100 ABS: 75%	>60% FOR 250 DEG 78% MAX
C	14	70	INTACT	400 DIFF: OK 100 ABS: OK RPC: INDICATIONS	400 DIFF: OK 100 ABS: <20%	30% MAX IN 40 MIL BAND
C	32	71	FRACTURED AT TTS	400 DIFF: DENT 100 ABS: SMALL DENT RPC: INDICATIONS	400 DIFF: DENT 100 ABS: 49%	35% AT AND BELOW FRACTURE
C	22	44	INTACT	400 DIFF: DTS 100 ABS: ABNORMALITY NOTED RPC: NO INDICATIONS	400 DIFF: DTS 100 ABS: 19%	25% MAX FOR 60 MILS
C	17	45	INTACT	400 DIFF: OK 100 ABS: OK RPC: NO INDICATIONS	400 DIFF: OK 100 ABS: 51%	GENERAL IGA FOR 2" ATS 60% MAX 1" ATS
C	25	80	INTACT (W/SLEEVE)	400 DIFF: NDD 100 ABS: NDD RPC: 48%	400 DIFF: DENT 100 ABS: 28%	40% MAX OVER 60 MIL BAND
C	10	43	FRACTURED AT TTS	400 DIFF: NDD 100 ABS: NDD RPC: 69%	400 DIFF: DENT 100 ABS: 60%	NOT PERFORMED

4. Assessment of IGA Progression

This Section describes the results of the 1985 re-evaluation of San Onofre Unit 1 eddy current data for sleeved and non-sleeved tubes. Eddy current data from 1973 to 1982 was reviewed and compared to determine the extent to which IGA and "IGA-like" indications have been present and have changed over the years.

Table 4-1 lists the inspections from which eddy current data was re-evaluated. Also included in this Table are the probe sizes and types as well as the test frequencies and modes and numbers of tubes from each inspection which were re-evaluated in 1985.

Figures 4-1 through 4-6 show the locations of tubes re-evaluated from each inspection. Table 4-2 lists the numbers of re-evaluated tubes which were common to two or more inspections.

From the inspections prior to 1980, composite eddy current signatures and horizontal and vertical channels of the 400 kHz differential bobbin were reproduced using the DDA-4 analysis system. From the 1980 and 1982 inspections, the 400 kHz (1980 only), 340 kHz and 340/100 kHz mix were reproduced as was the 100 kHz absolute. The documented signatures were then sorted into groups of tubes inside and outside the sleeving boundary. The signatures from various inspections of a given tube were compared to determine whether responses indicative of IGA were present and to what extent these have changed. Identification of IGA and "IGA-like" responses was based on pulled tube data (Section 3), data on tubes known to have leaked due to top of tube sheet defects and data on tubes known to be within the active regions of IGA as identified in 1980.

Representative histories of tubes within active regions and having unambiguous indications of IGA at the top of the tubesheet in 1980 are contained in Appendix C. These histories are comparable to and supplement those in Appendix A. For all such tubes re-evaluated, there is evidence, dating back to the 1973 eddy current examination records, of IGA itself or signal distortions which can be attributed to IGA. For these tubes, there is also a consistent, detectable pattern of change toward greater degradation.

To illustrate the regionalization of activity within the tube bundle, eddy current signatures from columns of tubes which traverse active areas within the sleeving boundary were reviewed row by row to assess the similarity of responses. Representative data used in this review are presented in Appendix D. Data from columns 39 and 45 from the 1980 inspection and column 52 from the 1976 inspection are presented. Review of this type of data indicates that, associated with active and inactive regions, there are characteristic eddy current responses.

Representative histories of tubes in the non-sleeved regions, that are currently in service, are presented in Appendix E. In the review of non-sleeved tube inspection data, unlike data from tubes in active regions, no significant changes in eddy current signatures were observed from one inspection to the next. In addition, this review did not identify any discretely quantifiable, unambiguous IGA indications such as those found in the active regions. However, distorted tubesheet indications (DTS) which may indicate the presence of IGA in the non-sleeved region were observed. The locations of these DTS indications are plotted in Figure 4-7. As noted above, comparison of historical data on these DTS indications show no significant change from inspection to inspection. From these results, it is concluded that there is not a significant IGA progression rate in the non-sleeved tubes.

In summary, it is concluded that IGA and "IGA-like" eddy current indications have been present since 1973, that there is regionalization of IGA activity within the tube bundle, and that the non-sleeved tubes are in a region of inactivity.

TABLE 4-1

BOBBIN COIL EXAMINATIONS

STEAM GENERATOR 'A'

SAN ONOFRE UNIT 1

EXAMINATION DATE	PROBE SIZE	FREQUENCY	MODE	TUBES EVALUATED ('85)
JUNE 1973	560 SPF*	400kHz	DIFF	355
APRIL 1975	560 SPF	400kHz	DIFF	519
OCT. 1976	560 SPF	400kHz	DIFF	541
SEPT. 1977	560 SF**	400kHz	DIFF	201
JUNE 1979	560 SF	400kHz	DIFF	111
APRIL 1980	580 SF	MULTI	DIFF/ ABS	3500
MARCH 1982	560 SF	MULTI	DIFF/ ABS	427

* special flex

** spring flex

TABLE 4-2

NUMBER OF TUBES AND EDDY CURRENT SIGNALS

COMPARED IN 1985 RE-EVALUATION

STEAM GENERATOR 'A'

SAN ONOFRE UNIT 1

DATES OF INSPECTIONS COMPARED	NUMBER OF TUBES COMPARED	NUMBER OF TOP OF TUBESHEET SIGNALS
73/80	255	510
73/80/82	63	189
73/76/80	9	27
73/76/80/82	4	16
73/77/80	4	12
73/77/79/80	1	4
73/77/80/82	1	4
75/80	78	156
75/76/80	25	75
75/76/77/80	3	12
75/77/80	46	138
75/79/80	16	48
76/80	243	486
76/80/82	37	111
76/77/80	130	390
76/77/80/82	16	64
76/77/79/80	8	32
76/77/79/80/82	1	5
76/79/80	7	21
77/80	176	352
77/79/80	3	9

TABLE 4-2 (CONTINUED)

DATES OF INSPECTIONS COMPARED	NUMBER OF TUBES COMPARED	NUMBER OF TOP OF TUBESHEET SIGNALS
77/80/82	55	165
79/80	74	148
79/80/82	2	6
80/82	257	514

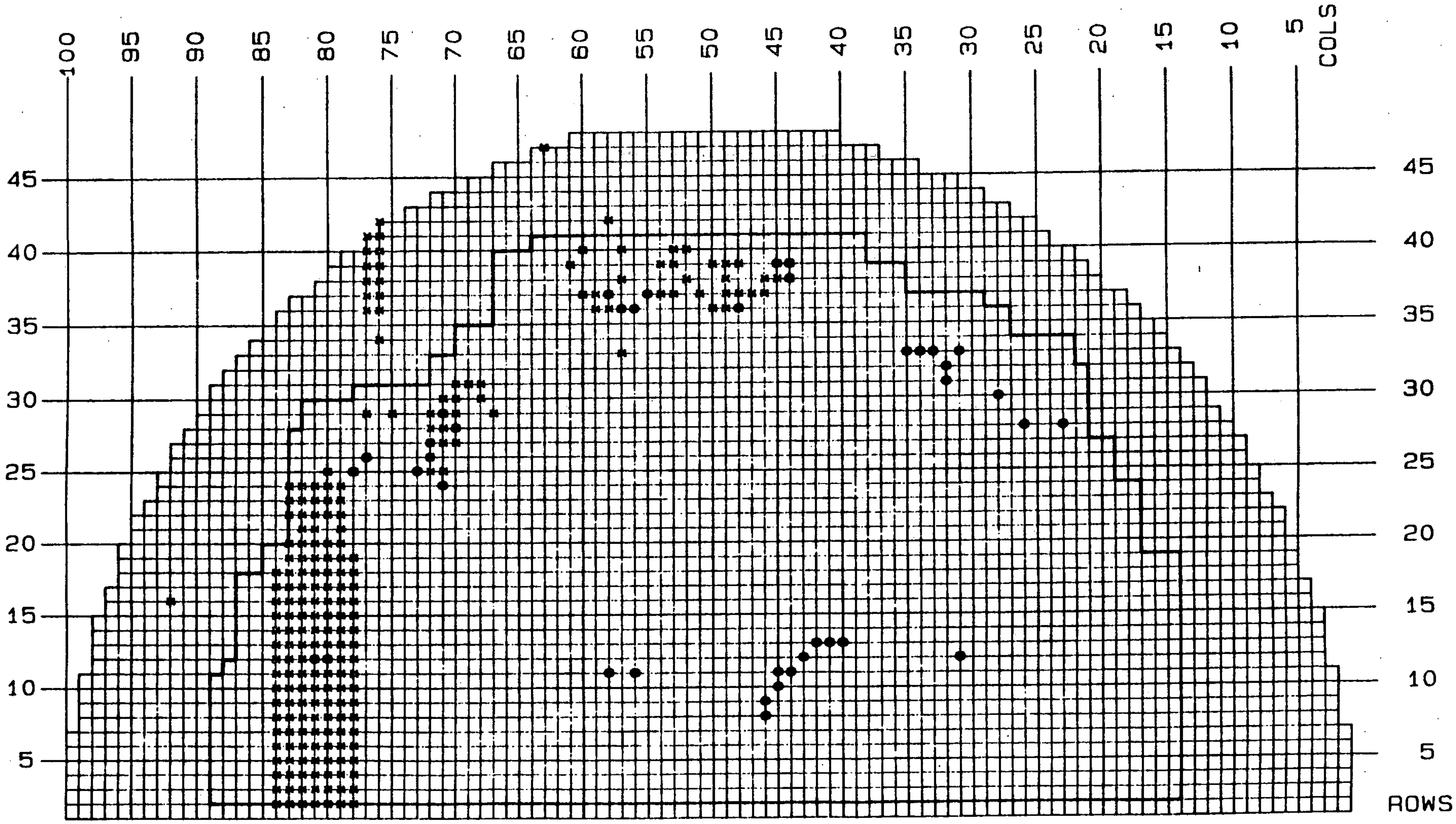
TOTAL NUMBER OF TUBES COMPARED = 1514

TOTAL NUMBER OF SIGNALS COMPARED = 3494

FIGURE 4-1

SAN ONOFRE UNIT 1 S/G 'A'

HOT LEG ELEVATION: TUBESHEET REPORT DATE: MARCH '85

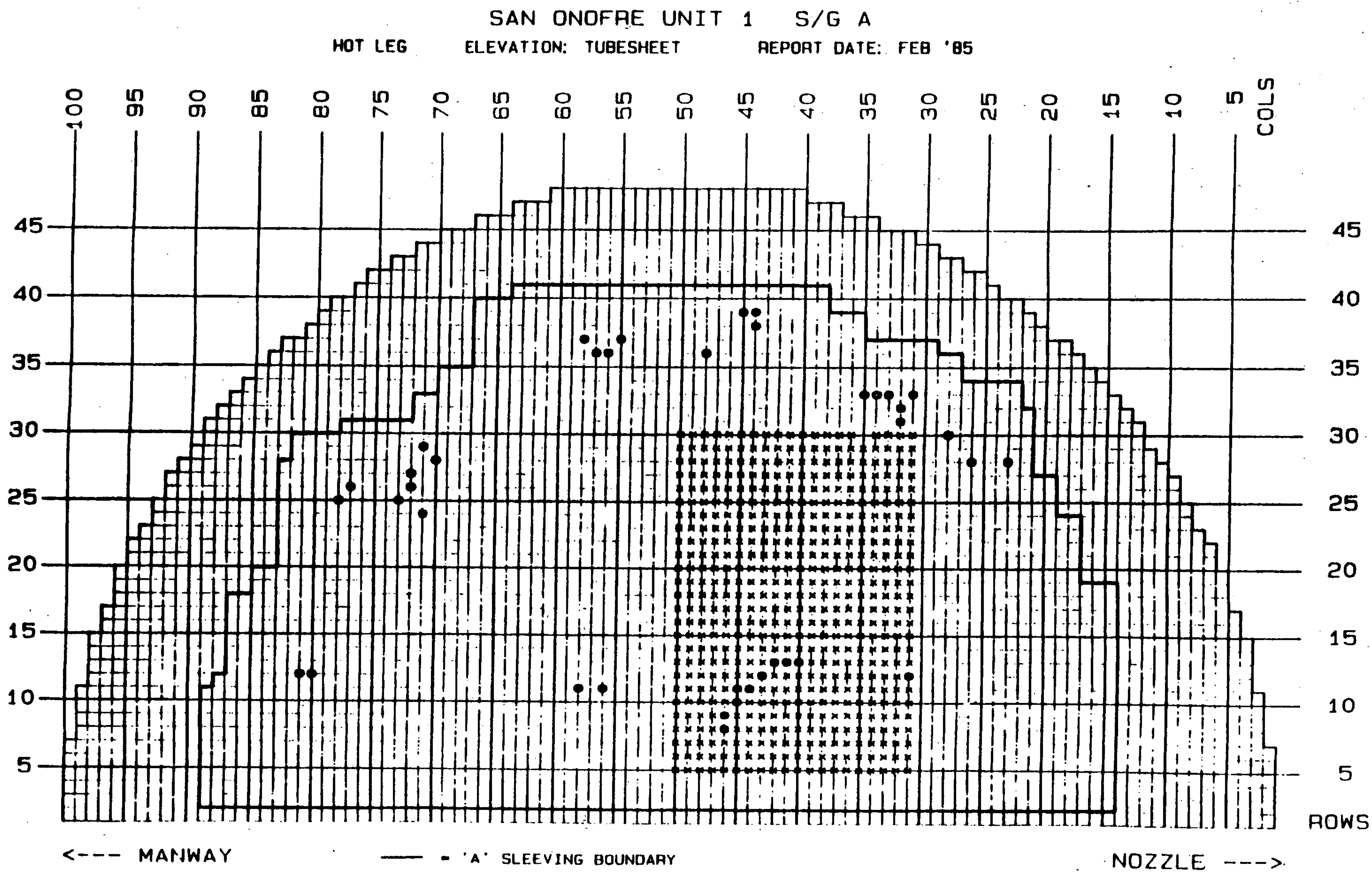


<---MANWAY —— = 'A' SLEEVING BOUNDARY NOZZLE--->

X = TUBES INSPECTED IN '73 AND RE-EVALUATED IN '85

● =38 TUBES USED TO ESTABLISH '81 IGA RATE

FIGURE 4-2



X = TUBES INSPECTED IN '75 AND RE-EVALUATED IN '85

● = 39 TUBES USED TO ESTABLISH '81 IGA RATE

FIGURE 4-3

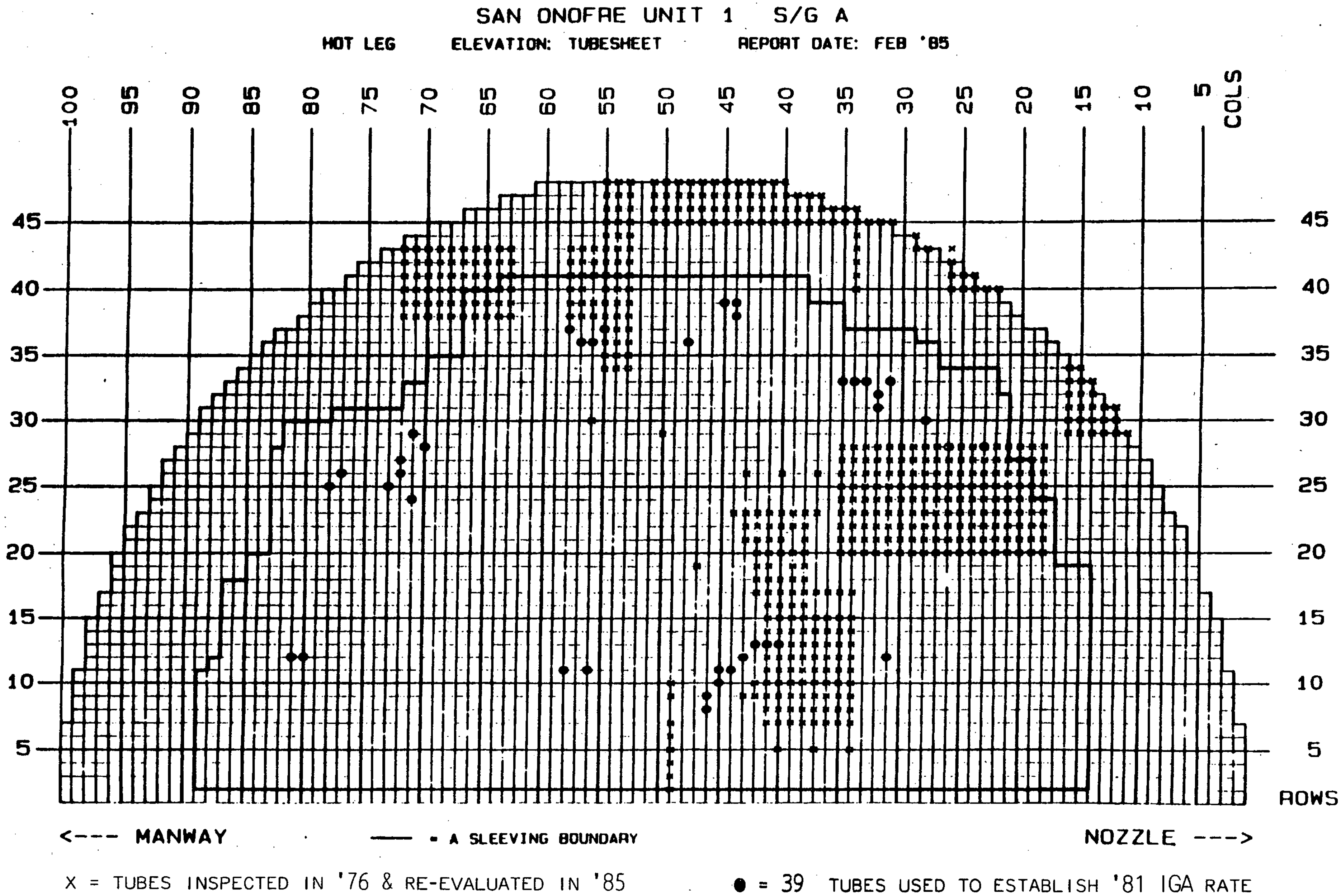
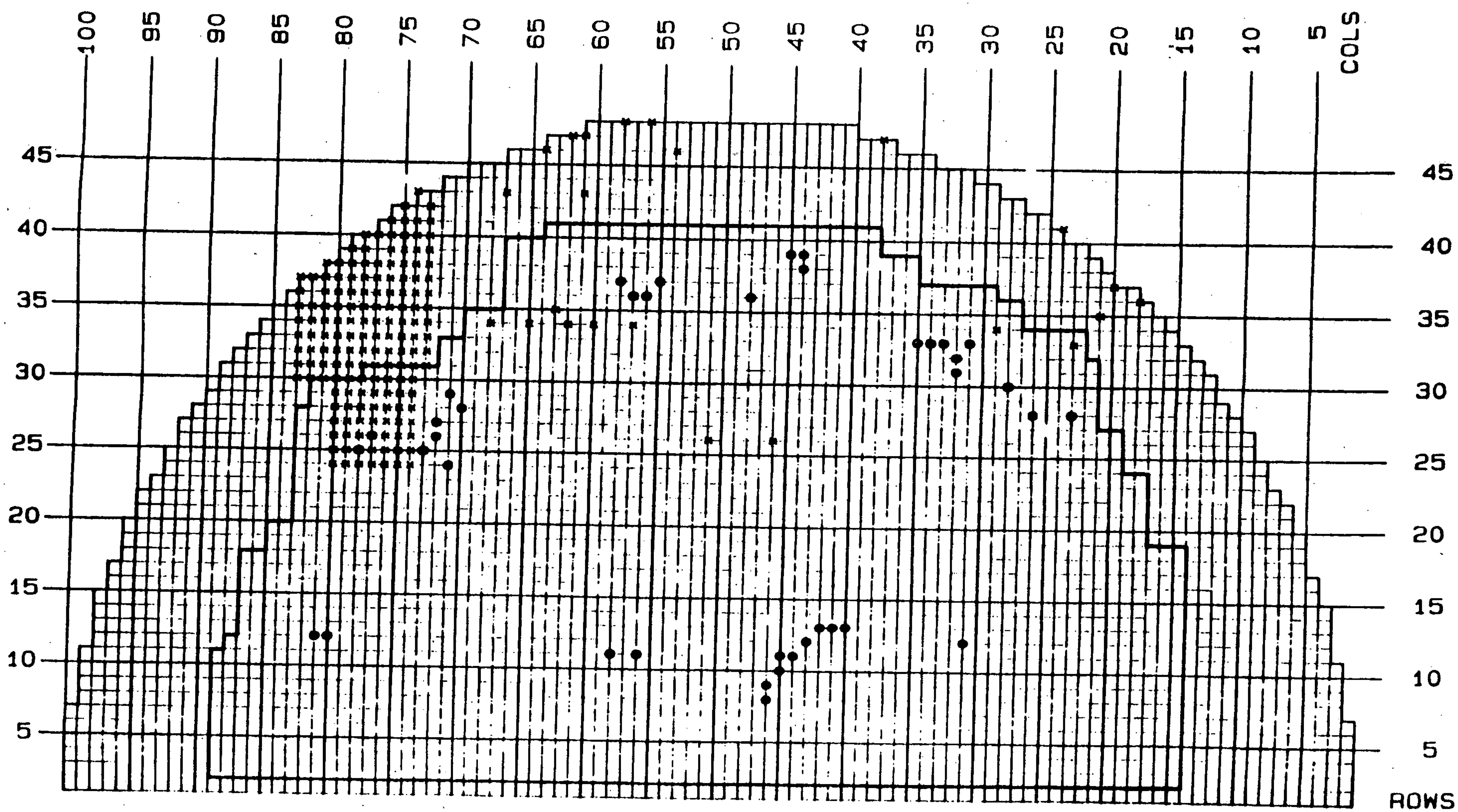

SAN ONOFRE UNIT 1 S/G A
HOT LEG ELEVATION: TUBESHEET REPORT DATE: FEB '85
100 95 90 85 80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 COLS
45 40 35 30 25 20 15 10 5
ROWS
<--- MANWAY
—— = A SLEEVING BOUNDARY
NOZZLE --->
X = TUBES INSPECTED IN '76 & RE-EVALUATED IN '85
● = 39 TUBES USED TO ESTABLISH '81 IGA RATE

FIGURE 4-4

SAN ONOFRE UNIT 1 S/G 'A'

HOT LEG ELEVATION: TUBESHEET REPORT DATE: FEB '85



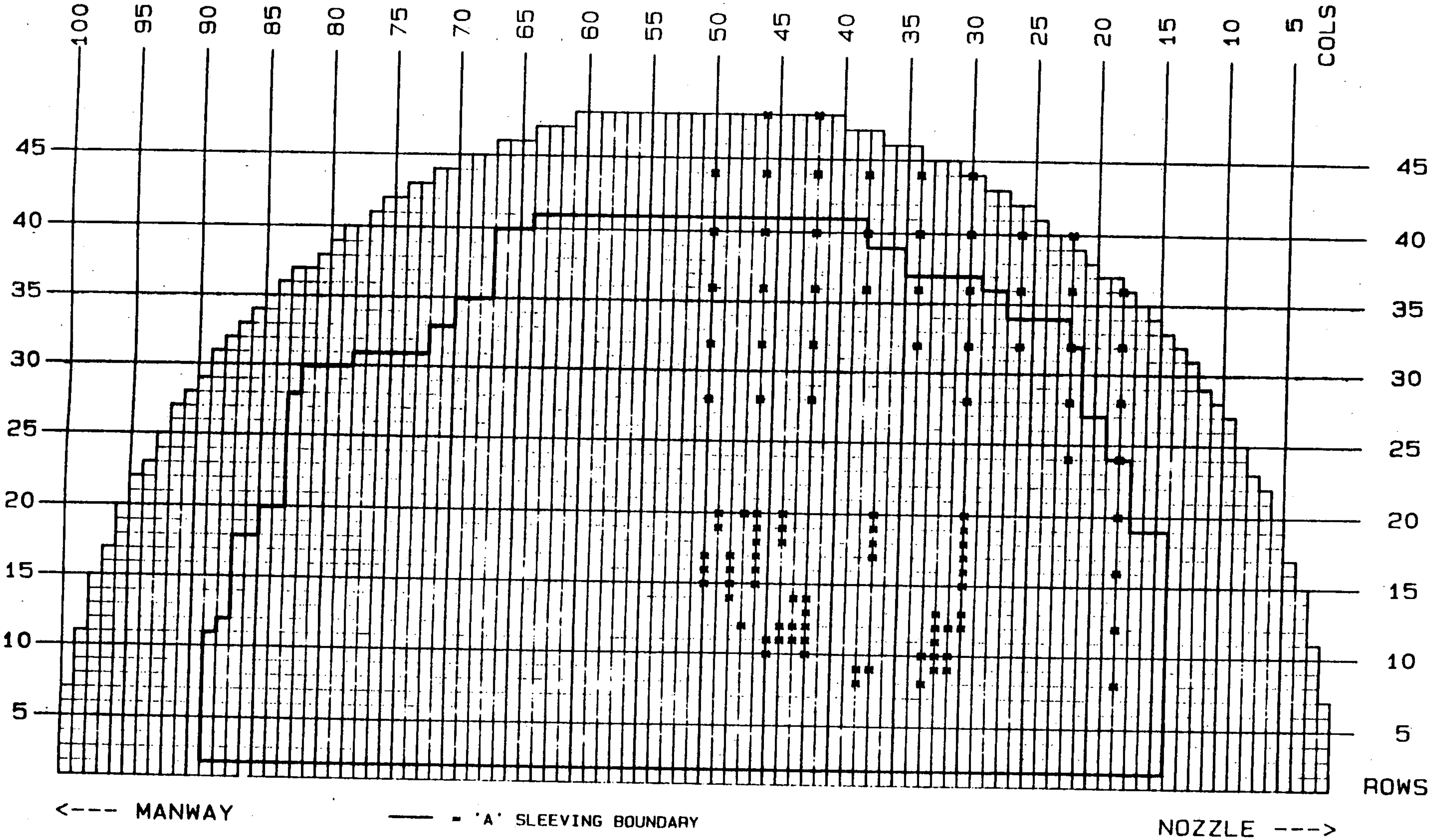
<--- MANWAY —— = 'A' SLEEVING BOUNDARY NOZZLE --->

X = TUBES INSPECTED IN '77 AND RE-EVALUATED IN '85 ● = 39 TUBES USED TO ESTABLISH '81 IGA RATE

FIGURE 4-5

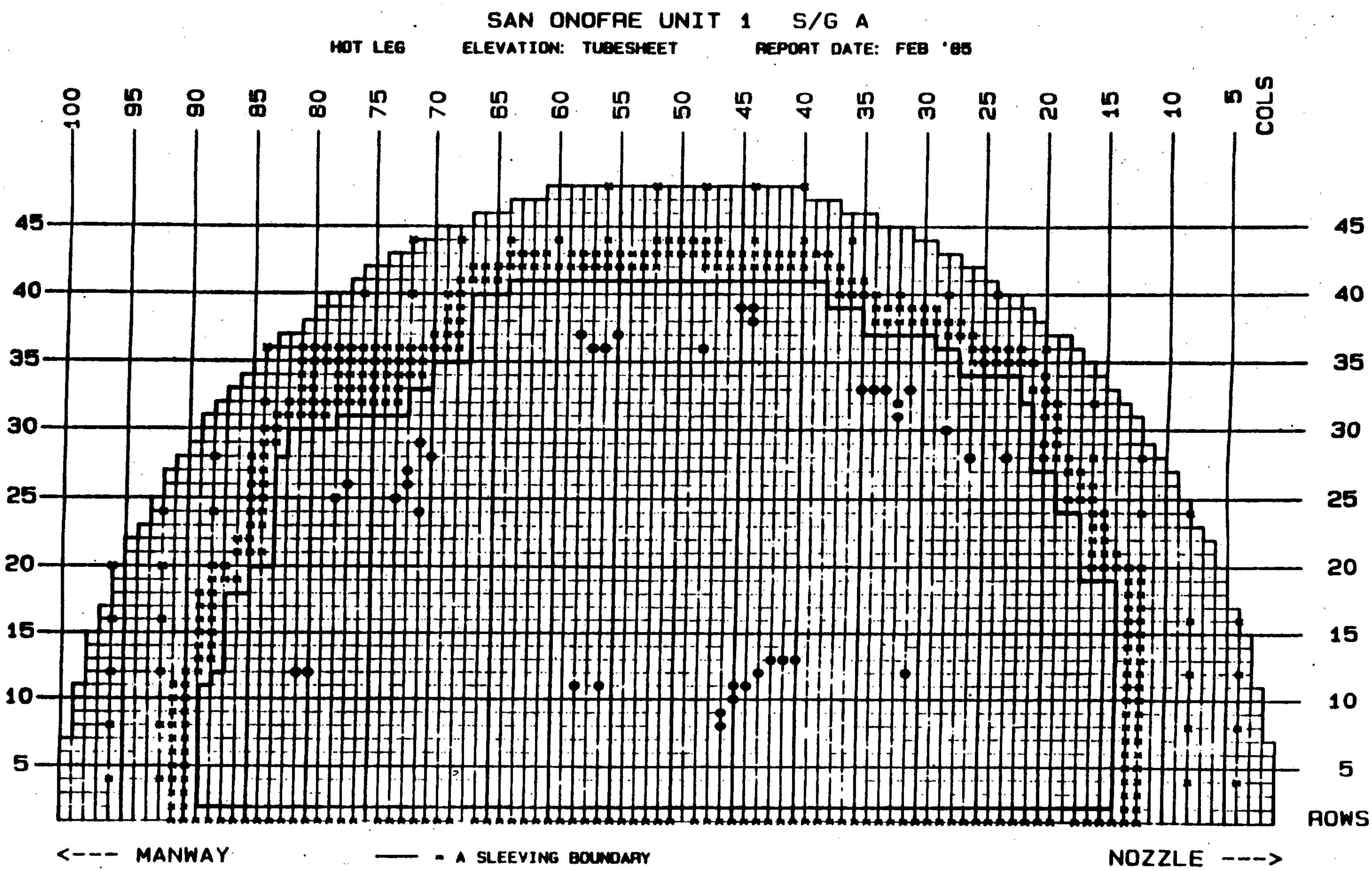
SAN ONOFRE UNIT 1 S/G 'A'

HOT LEG ELEVATION: TUBESHEET REPORT DATE: MARCH 1985



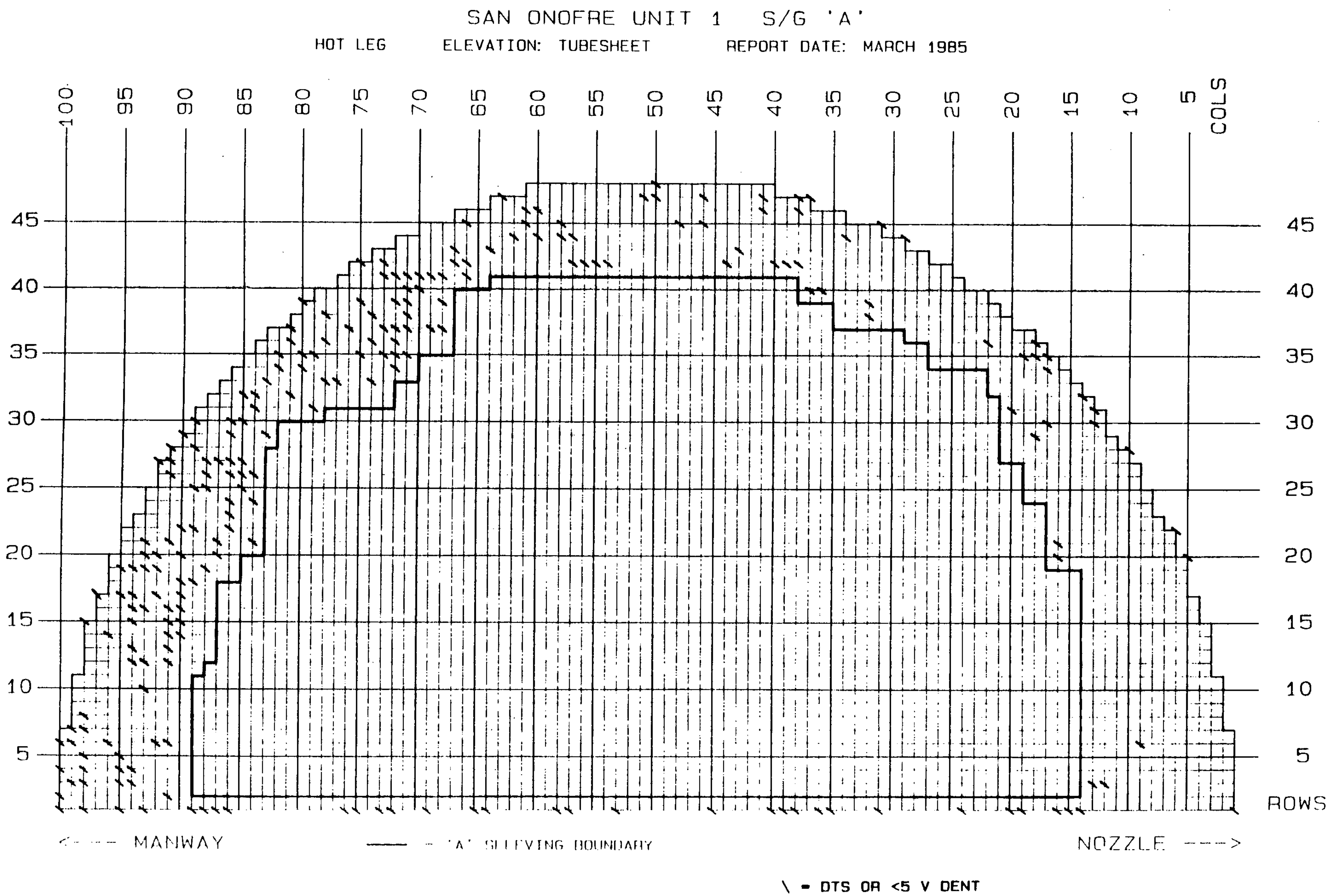
X = TUBES INSPECTED IN '79 AND RE-EVALUATED IN '85

FIGURE 4-6



X = TUBES INSPECTED IN '82 AND RE-EVALUATED IN '85 ● = 39 TUBES USED TO ESTABLISH '81 IGA RATE

FIGURE 4-7


SAN ONOFRE UNIT 1 S/G 'A'
HOT LEG ELEVATION: TUBESHEET REPORT DATE: MARCH 1985
100 95 90 85 80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 COLS
45 40 35 30 25 20 15 10 5
ROWS
<--- MANWAY
—— = 'A' SLEEVING BOUNDARY
NOZZLE --->
\ = DTS OR <5 V DENT

5. Conclusions

Based on the correlation of 1980 ECT data with the pulled tube metallurgical results, as discussed in Section 3, the bobbin coil can be used to detect IGA, as found at San Onofre Unit 1, at levels in excess of 20%. This value demonstrates the conservatism of the commonly accepted detectability threshold of 40%.

The results of the review presented in Section 4 of historical eddy current inspection data clearly identify the non-sleeved tubes as an "inactive" region of the tube bundle. However, the presence of non-quantifiable "IGA-like" indications in certain non-sleeved tubes indicates that IGA may be present, but based on the detectability threshold discussed above, it is concluded that IGA in the non-sleeved region is not likely to have progressed to levels greater than 40%.

Based on the comparison of historical data discussed in Section 4, evidence of IGA-like eddy current indications is present in the earliest available inspection data. This would indicate that IGA commenced sometime prior to 1973.

If it is conservatively assumed that the 1973 level of IGA in all non-sleeved tubes was 0% and it is ackowledged that IGA may have progressed to 1980 levels approaching 40%, then a conservative degradation rate for the non-sleeved region can be established. Since approximately 60 EFPM of operation occured between 1973 and 1980, the assumed, worst case IGA progression rate is 40% per 60 EFPM, or 10% per 15 EFPM refueling cycle operating interval.

A review of Table 3-1 in Section 3 shows good detectability at IGA levels $\geq$ 20%, which, when the DTS indications are considered, leads to the conclusion that the actual IGA level in non-sleeved tubes is not likely to have exceeded the 20% to 30% level. However, using the 10% per 15 EFPM IGA progression rate and conservatively assuming that IGA is near the 40% level in the non-sleeved tubes, eddy current inspections at refueling outage intervals will ensure that tube degradation due to IGA will be detected consistent with the 50% plugging limit for San Onofre Unit 1 non-sleeved tubes. Based on the results of the anaysis presented in Appendix C.3.1 of Reference 2, non-sleeved tubes with up to 40% remaining wall and a potential loss of lateral support at the lower (one or two) support plates meet the applicable tube integrity design requirements. Therefore, it is concluded that, with a conservatively assumed IGA level of 40% and a 10% per 15 EFPM degradation rate, at the end of a 15 EFPM refueling cycle operating interval there is a 10% margin to the allowable minimum wall under postulated worst case accident conditions.

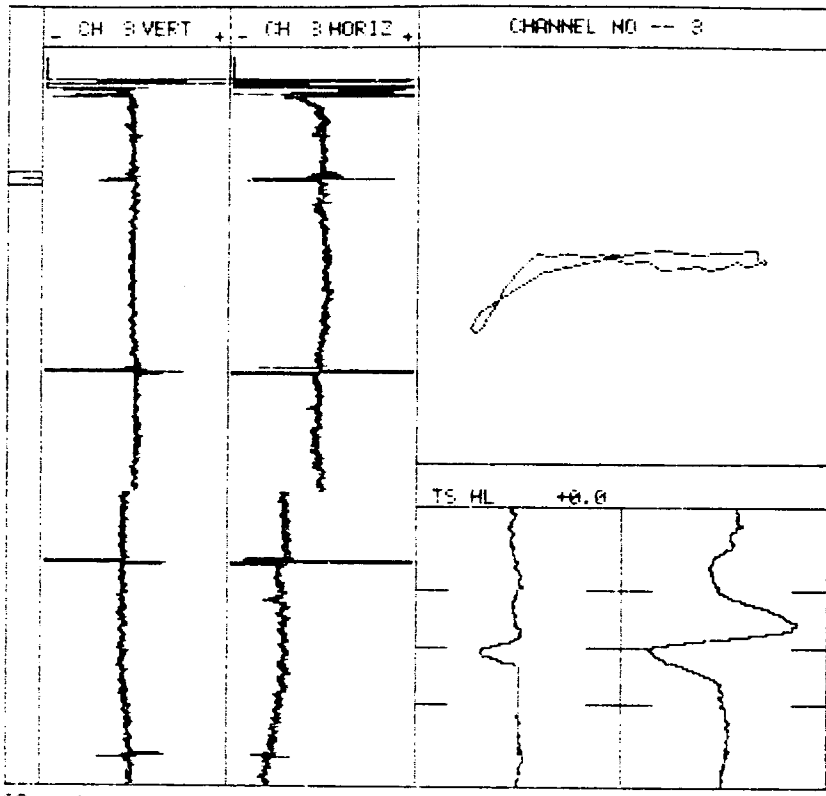
6. References

1. "STEAM GENERATOR REPAIR PROGRAM, RETURN TO POWER REPORT FOR SAN ONOFRE UNIT 1", April, 1981.

2. "STEAM GENERATOR INSPECTION PROGRAM, RETURN TO POWER REPORT, SAN ONOFRE NUCLEAR GENERATING STATION, UNIT 1", dated September, 1982, Volume I.

APPENDICIES

APPENDIX A

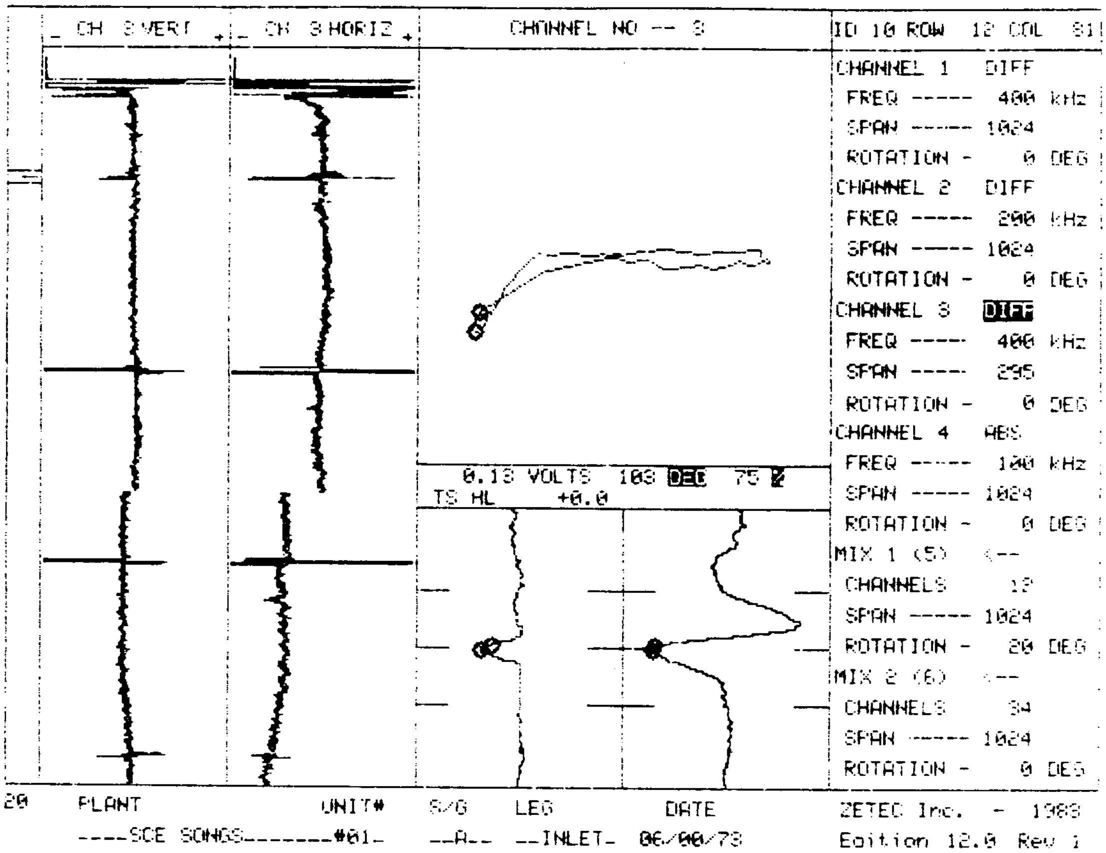


ID 10 ROW 12 COL 81

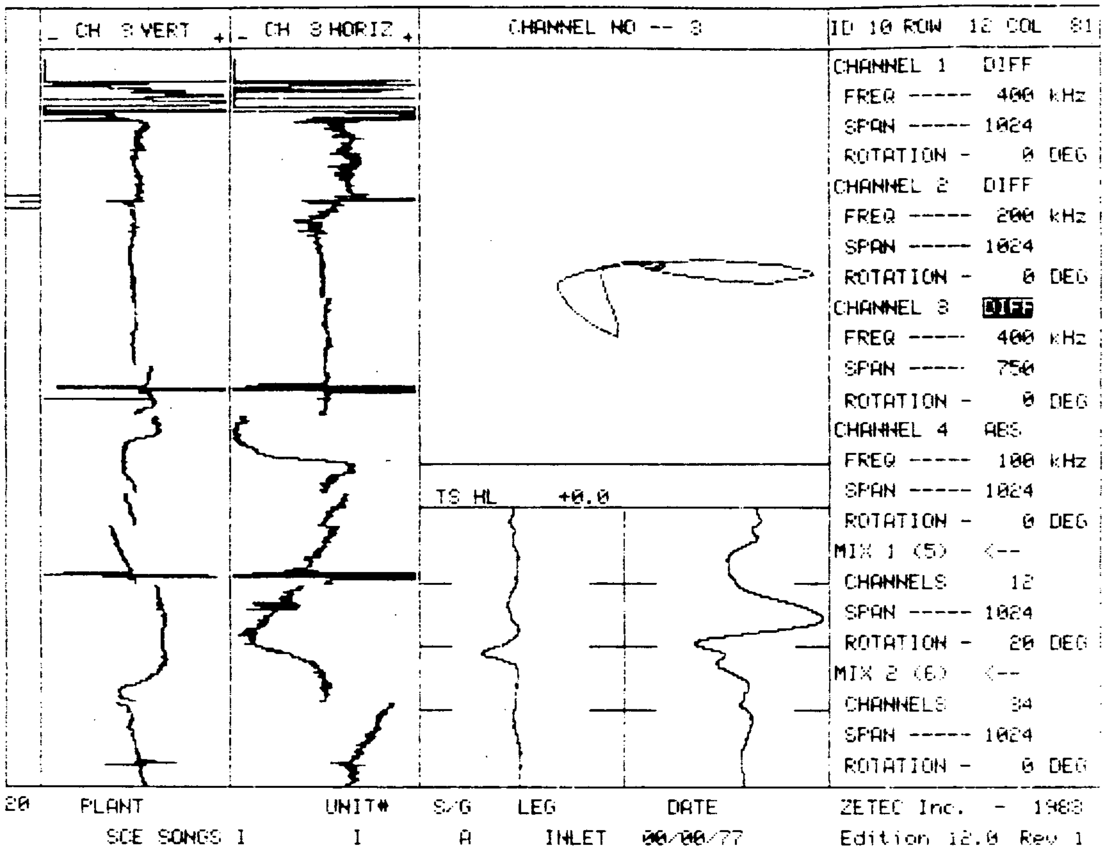
CHANNEL 1 DIFF
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 200 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 400 kHz
SPAN ----- 295
ROTATION - 9 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 12
SPAN ----- 1024
ROTATION - 20 DEG
MIX 2 (6) <--
CHANNELS 34
SPAN ----- 1024
ROTATION - 0 DEG

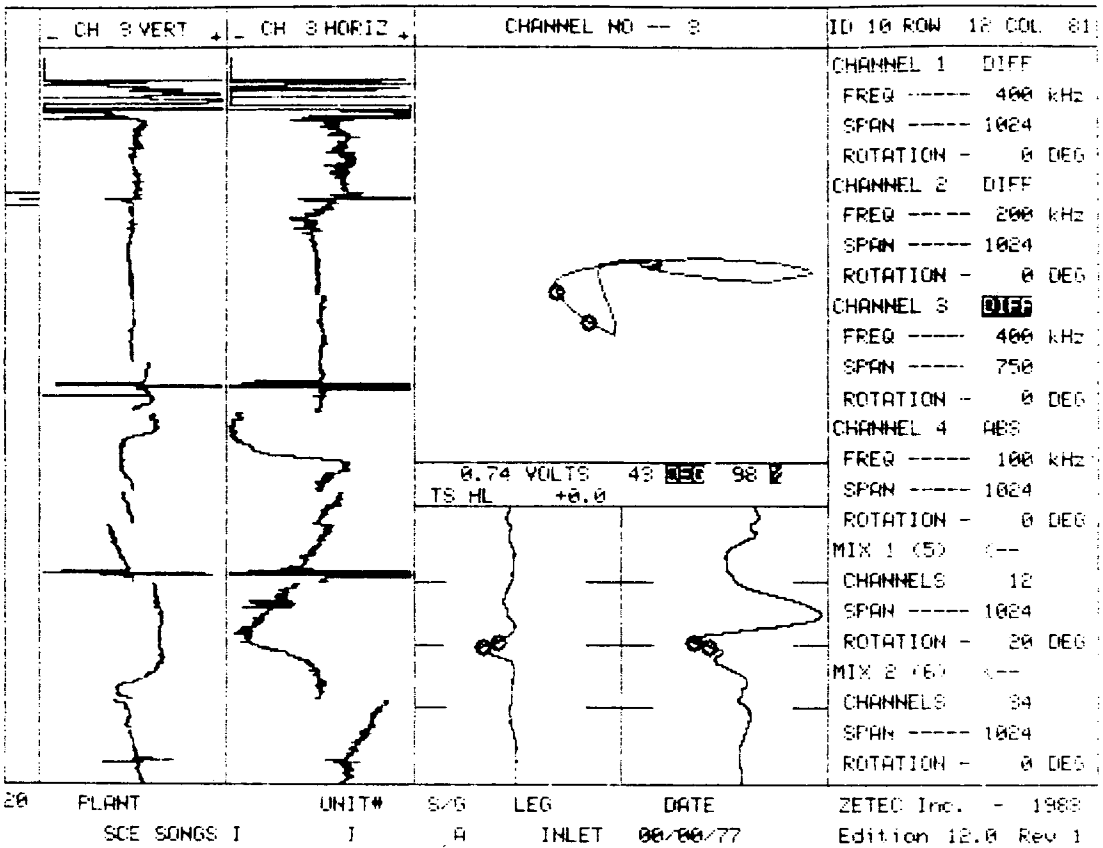
20 PLANT UNIT# S/G LEG DATE
----SCE SONGS--------#01- --A-- --INLET- 06/00/73

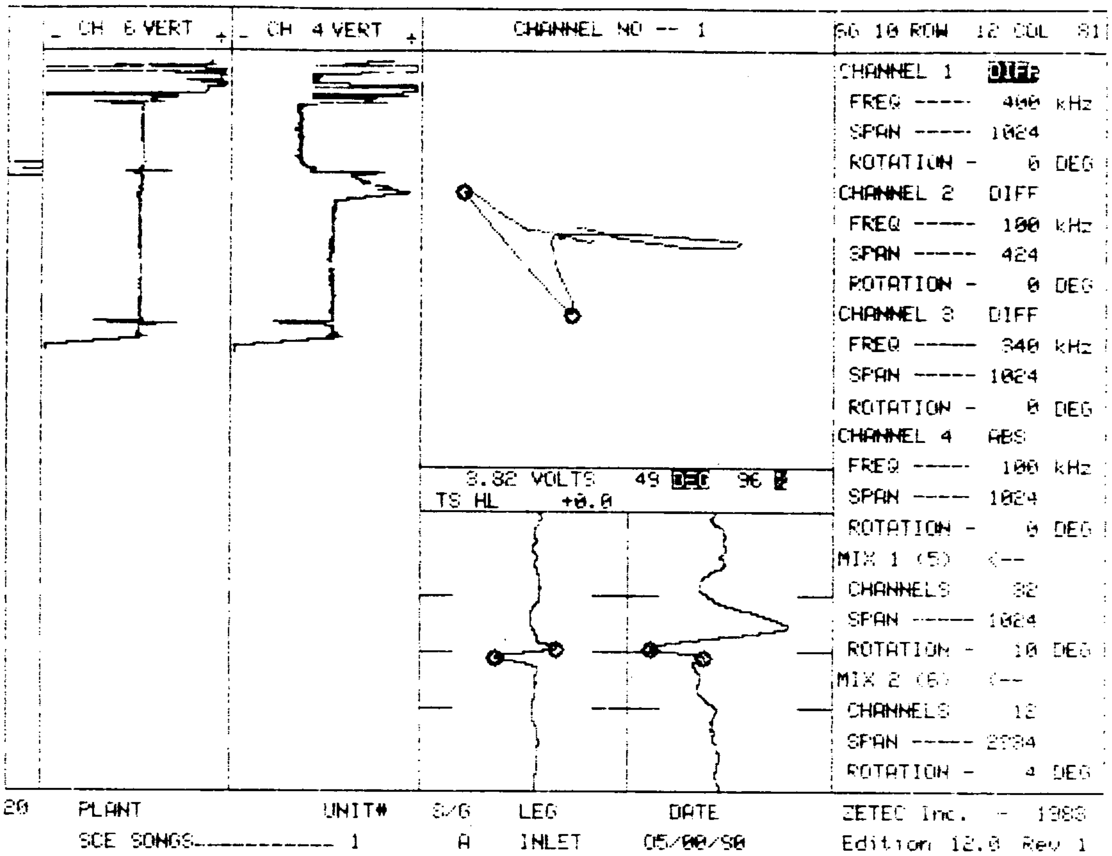
ZETEC Inc. - 1983
Edition 12.0 Rev 1



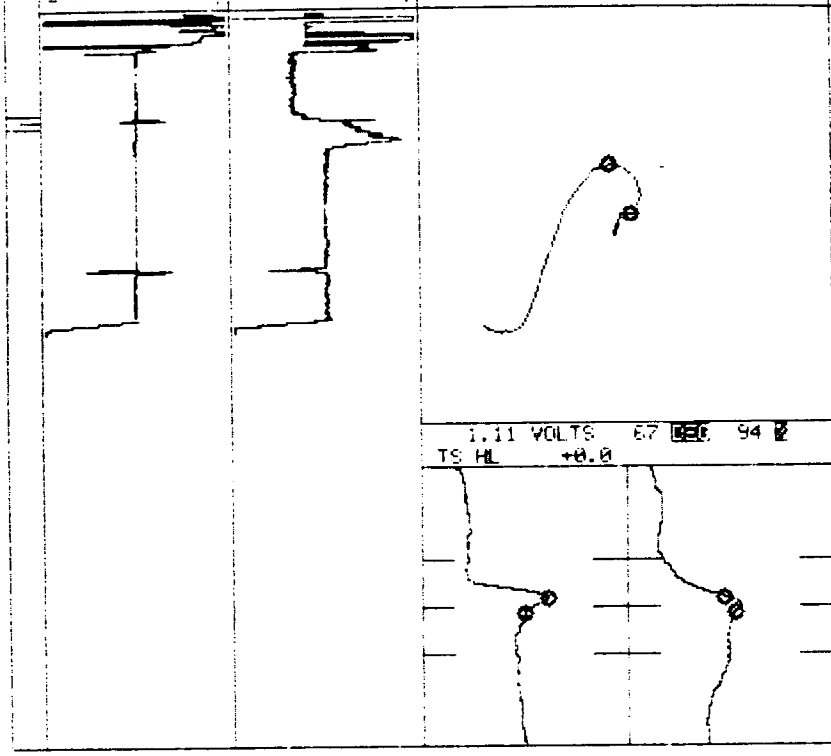
CH 3 VERT
CH 3 HORIZ
CHANNEL NO -- 3
ID 10 ROW 12 COL 81
CHANNEL 1 DIFF
FREQ ----- 400 kHz
SPAN ------ 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 200 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 400 kHz
SPAN ----- 295
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 12
SPAN ----- 1024
ROTATION - 20 DEG
MIX 2 (6) <--
CHANNELS 34
SPAN ----- 1024
ROTATION - 0 DEG
0.13 VOLTS 103 DEG 75 %
TS HL +0.0
20 PLANT UNIT# S/G LEG DATE
----SCE SONGS--------#01- --A-- --INLET- 06/00/73
ZETEC Inc. - 1983
Edition 12.0 Rev 1


CH 3 VERT
CH 3 HORIZ
CHANNEL NO -- 3
ID 10 ROW 12 COL 81
CHANNEL 1 DIFF
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 200 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 400 kHz
SPAN ----- 750
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 12
SPAN ----- 1024
ROTATION - 20 DEG
MIX 2 (6) <--
CHANNELS 34
SPAN ----- 1024
ROTATION - 0 DEG
TS HL +0.0
20 PLANT UNIT# S/G LEG DATE
SCE SONGS I I A INLET 00/00/77
ZETEC Inc. - 1983
Edition 12.0 Rev 1


CH 3 VERT
CH 3 HORIZ
CHANNEL NO -- 3
ID 10 ROW 12 COL 81
CHANNEL 1 DIFF
FREQ ------ 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 200 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 400 kHz
SPAN ----- 750
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 12
SPAN ----- 1024
ROTATION - 20 DEG
MIX 2 (6) <--
CHANNELS 34
SPAN ----- 1024
ROTATION - 0 DEG
0.74 VOLTS 43 DEG 98 %
TS HL +0.0
20
PLANT UNIT# S/G LEG DATE
SCE SONGS I I A INLET 00/00/77
ZETEC Inc. - 1988
Edition 12.0 Rev 1



CH 6 VERT
CH 4 VERT
CHANNEL NO -- 1
SG 10 ROW 12 COL 81
CHANNEL 1 DIFF
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 100 kHz
SPAN ----- 424
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 340 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 32
SPAN ----- 1024
ROTATION - 10 DEG
MIX 2 (6) <--
CHANNELS 12
SPAN ----- 2204
ROTATION - 4 DEG
3.82 VOLTS 49 DEG 96 %
TS HL +0.0
20
PLANT UNIT# S/G LEG DATE
SCE SONGS 1 A INLET 05/00/90
ZETEC Inc. - 1983
Edition 12.0 Rev 1



SG 10 ROW 12 COL 81

CHANNEL 1 DIFF
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG

CHANNEL 2 DIFF
FREQ ----- 100 kHz
SPAN ----- 424
ROTATION -- 0 DEG

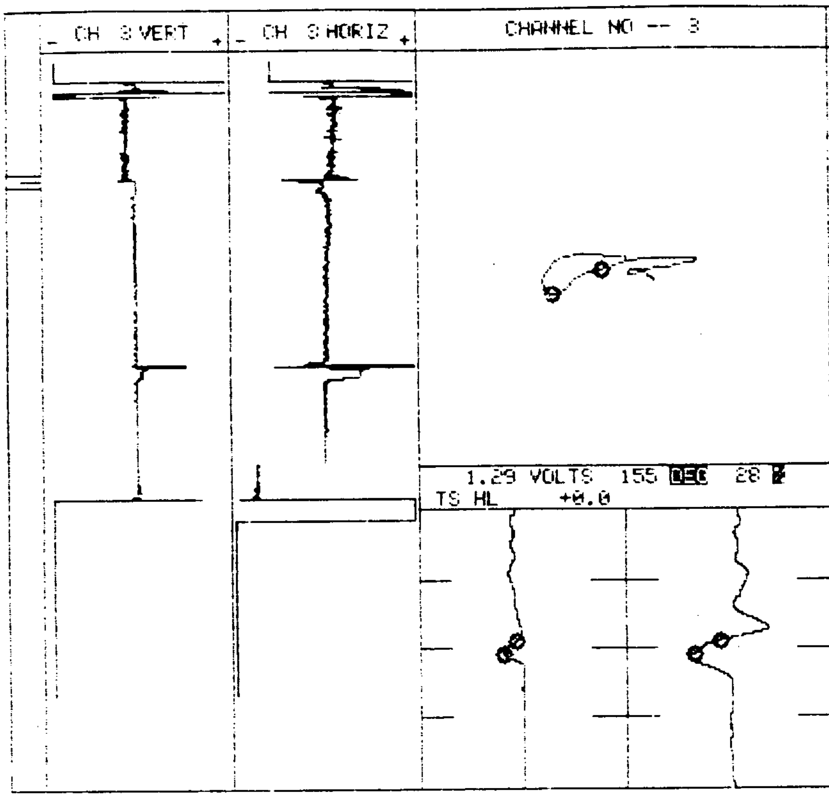
CHANNEL 3 DIFF
FREQ ----- 340 kHz
SPAN ----- 1024
ROTATION - 0 DEG

CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 914
ROTATION - 0 DEG

MIX 1 (5) <--
CHANNELS 32
SPAN ----- 1024
ROTATION - 10 DEG

MIX 2 (6) <--
CHANNELS 12
SPAN ----- 2334
ROTATION - 4 DEG

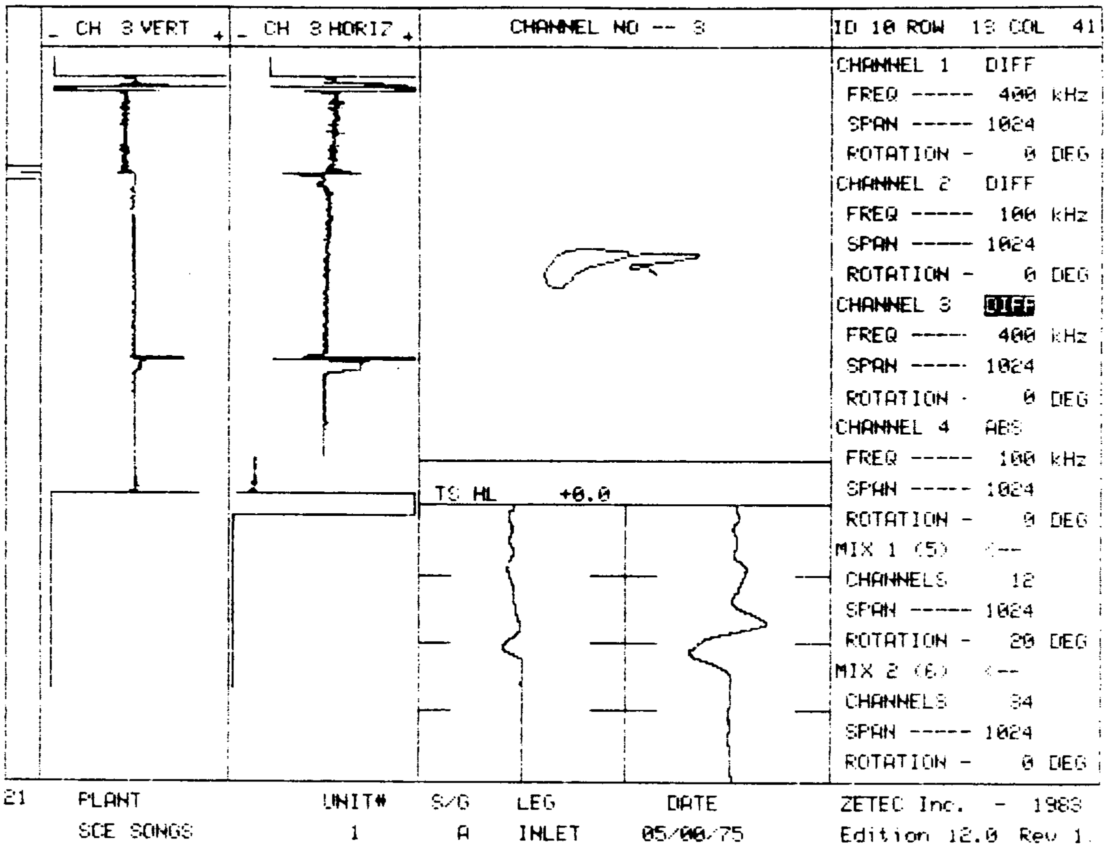
20	PLANT	UNIT#	S/G	LEG	DATE	ZETEC Inc. - 1988
	SCE SONGS	1	A	INLET	05/00/80	Edition 12.0 Rev 1



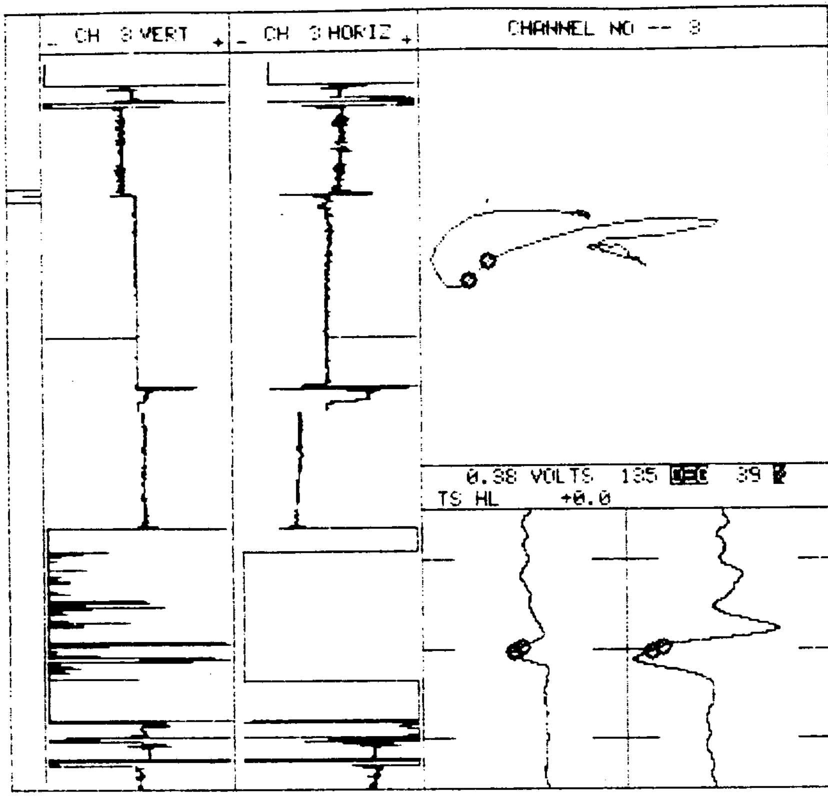
ID 10 ROW 13 COL 41

CHANNEL 1 DIFF
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 12
SPAN ----- 1024
ROTATION - 20 DEG
MIX 2 (6) <--
CHANNELS 34
SPAN ----- 1024
ROTATION - 0 DEG

21	PLANT	UNIT#	S/G	LEG	DATE	ZETEC Inc. - 1983
	SCE SONGS	1	A	INLET	05/00/75	Edition 12.0 Rev 1



CH 3 VERT
CH 3 HORIZ
CHANNEL NO -- 3
ID 10 ROW 13 COL 41
CHANNEL 1 DIFF
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 12
SPAN ----- 1024
ROTATION - 20 DEG
MIX 2 (6) <--
CHANNELS 34
SPAN ----- 1024
ROTATION - 0 DEG
TS HL +0.0
21
PLANT UNIT# S/G LEG DATE
SCE SONGS 1 A INLET 05/00/75
ZETEC Inc. - 1983
Edition 12.0 Rev 1.



ID 10 ROW 13 COL 41

CHANNEL 1 DIFF
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG

CHANNEL 2 DIFF
FREQ ----- 200 kHz
SPAN ----- 1024
ROTATION - 0 DEG

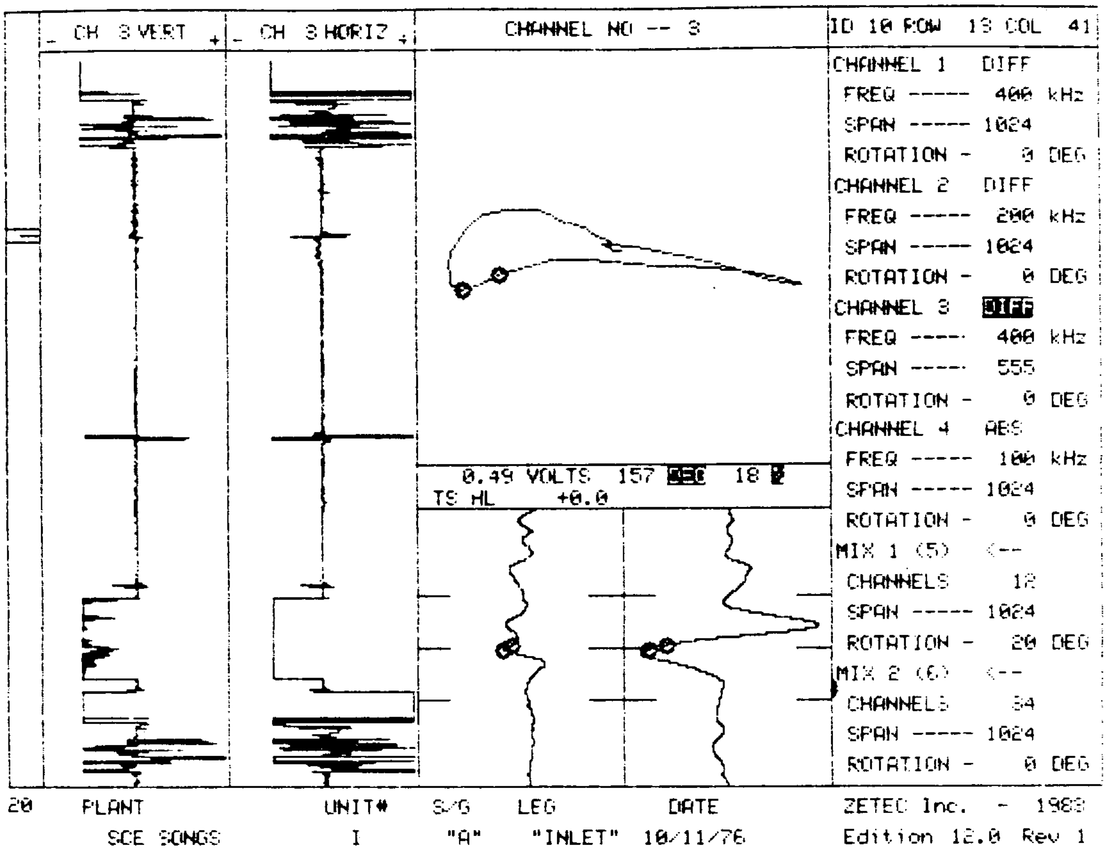
CHANNEL 3 DIFF
FREQ ----- 400 kHz
SPAN ----- 595
ROTATION - 0 DEG

CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG

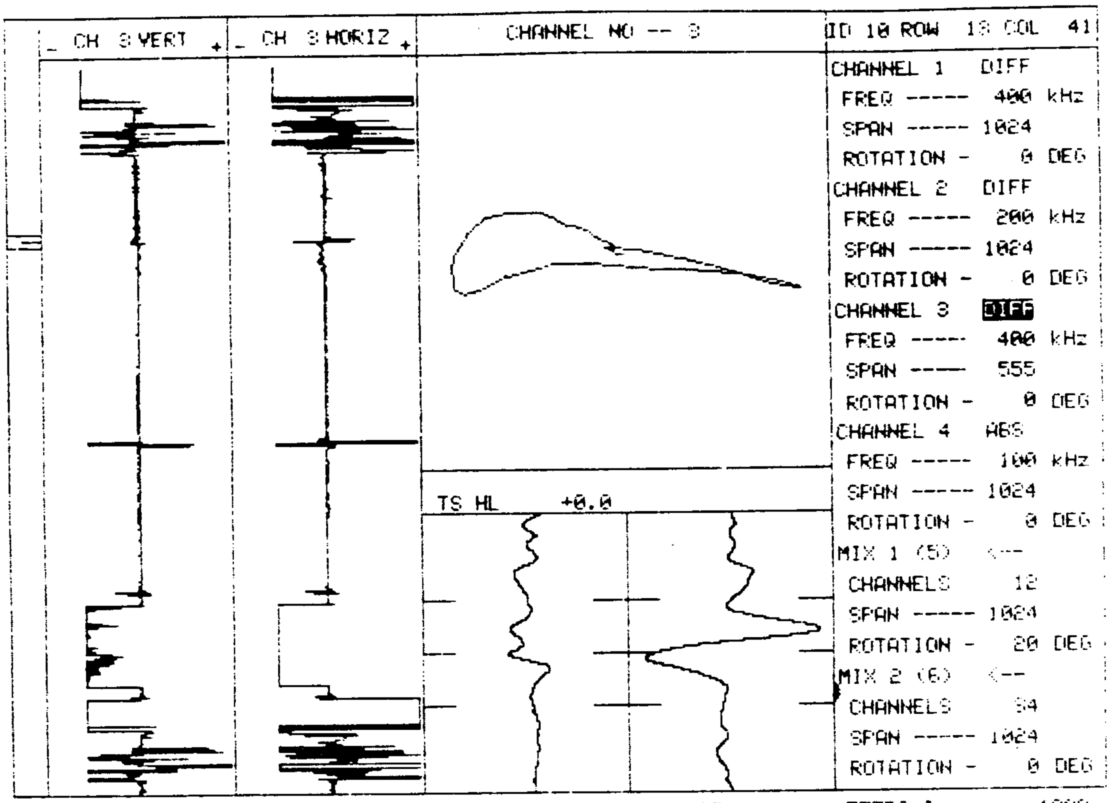
MIX 1 (5) <--
CHANNELS 12
SPAN ----- 1024
ROTATION - 20 DEG

MIX 2 (6) <--
CHANNELS 34
SPAN ----- 1024
ROTATION - 0 DEG

20 PLANT	UNIT#	S/G	LEG	DATE	ZETEC Inc. - 1983
SCE SONGS	1	"A"	"INLET"	04/11/75	Edition 12.0 Rev 1

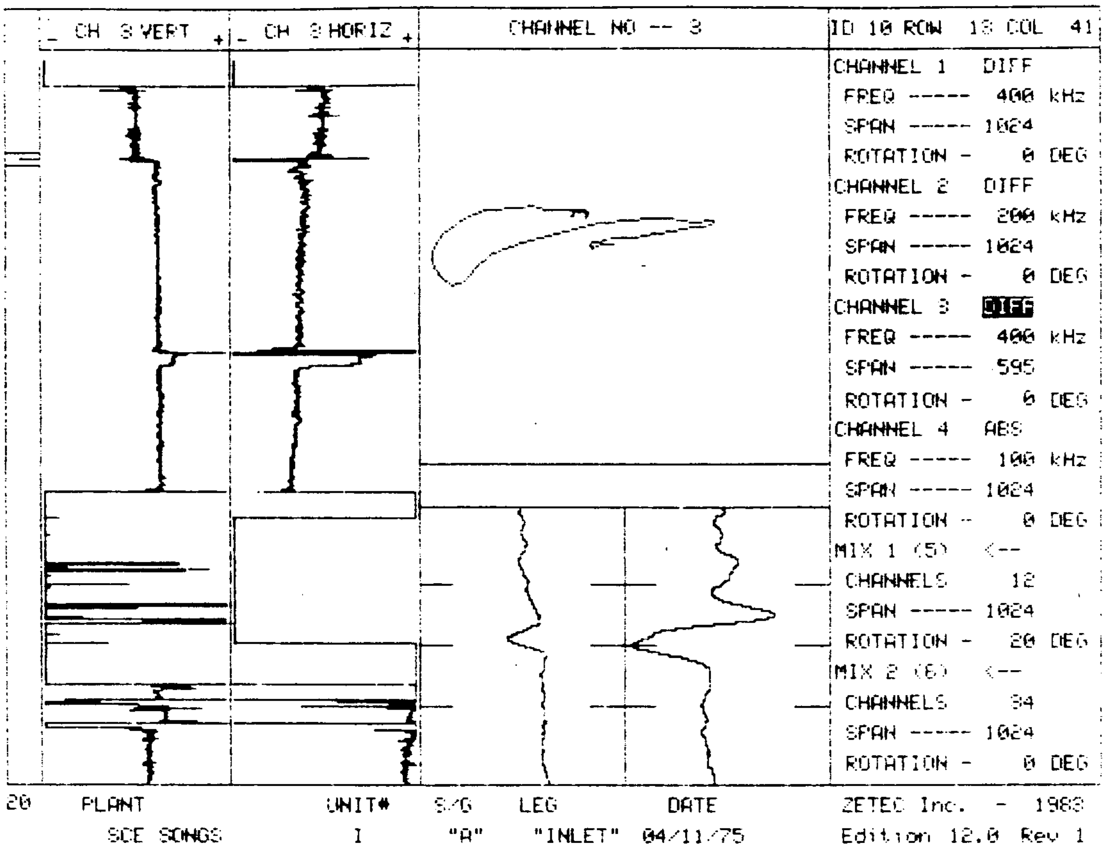


CH 3 VERT
CH 3 HORIZ
CHANNEL NO -- 3
ID 10 ROW 13 COL 41
CHANNEL 1 DIFF
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 200 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ---- 400 kHz
SPAN ---- 555
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 12
SPAN ----- 1024
ROTATION - 20 DEG
MIX 2 (6) <--
CHANNELS 34
SPAN ----- 1024
ROTATION - 0 DEG
0.49 VOLTS 157
18
TS HL +0.0
20
PLANT
SCE SONGS
UNIT#
I
S/G
"A"
LEG
"INLET"
DATE
10/11/76
ZETEC Inc. - 1983
Edition 12.0 Rev 1

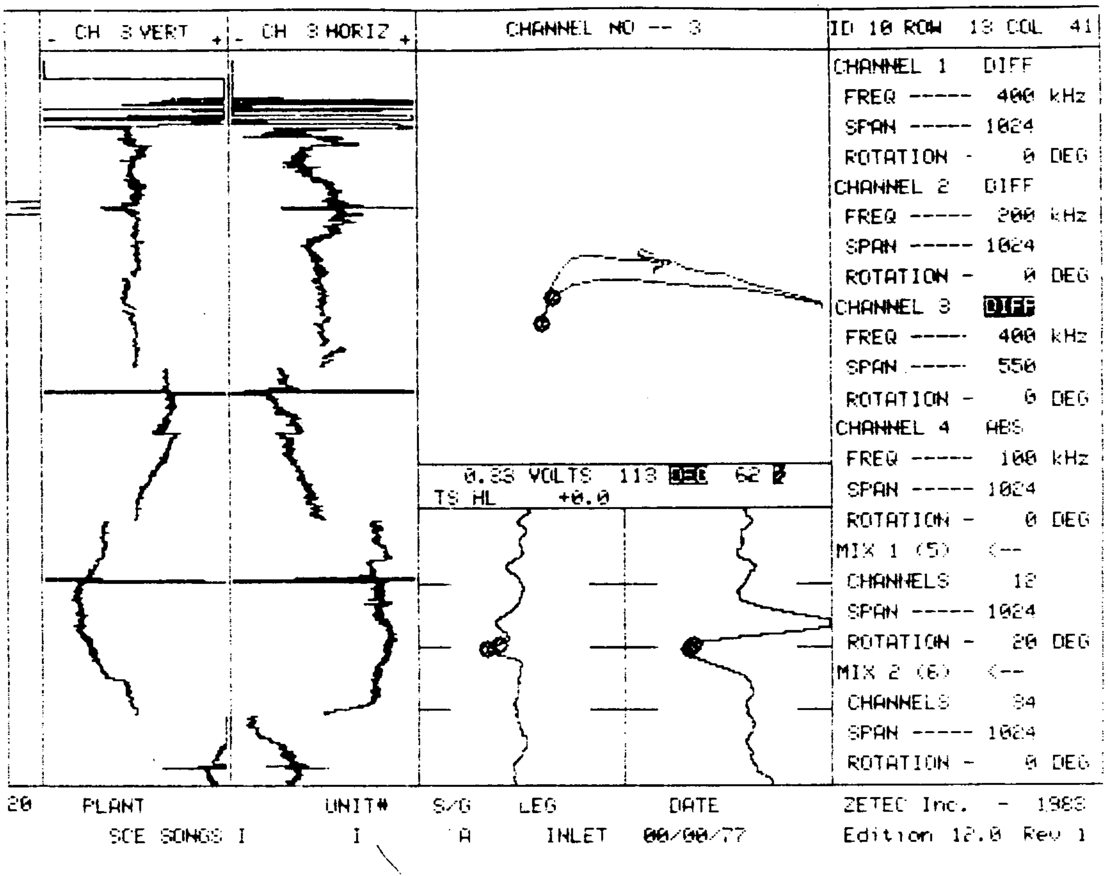


20 PLANT UNIT# S/G LEG DATE ZETEC Inc. - 1988

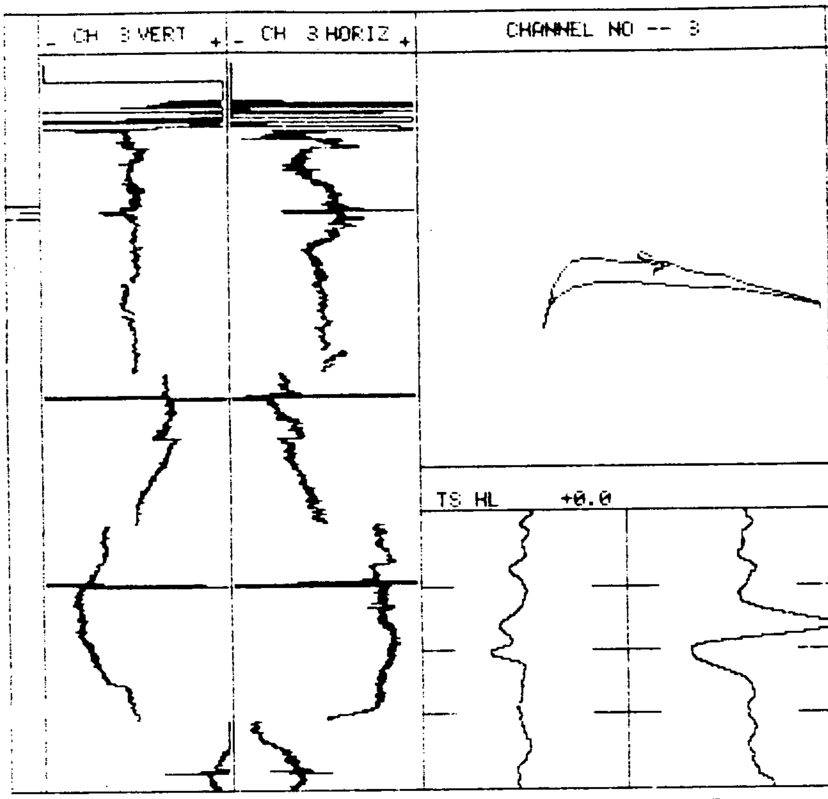
SCE SONGS I "A" "INLET" 10/11/76 Edition 12.0 Rev 1



- CH 3 VERT +
- CH 3 HORIZ +
CHANNEL NO -- 3
ID 10 ROW 13 COL 41
CHANNEL 1 DIFF
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 200 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 400 kHz
SPAN ----- 595
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 12
SPAN ----- 1024
ROTATION - 20 DEG
MIX 2 (6) <--
CHANNELS 34
SPAN ----- 1024
ROTATION - 0 DEG
20 PLANT UNIT# S/G LEG DATE
SCE SONGS I "A" "INLET" 04/11/75
ZETEC Inc. - 1983
Edition 12.0 Rev 1



CH 3 VERT
CH 3 HORIZ
CHANNEL NO -- 3
ID 10 ROW 13 COL 41
CHANNEL 1 DIFF
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 200 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 400 kHz
SPAN ----- 550
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 12
SPAN ----- 1024
ROTATION - 20 DEG
MIX 2 (6) <--
CHANNELS 34
SPAN ----- 1024
ROTATION - 0 DEG
0.33 VOLTS 113 DEG 62 P
TS HL +0.0
20 PLANT UNIT# S/G LEG DATE
SCE SONGS I I A INLET 00/00/77
ZETEC Inc. - 1983
Edition 12.0 Rev 1

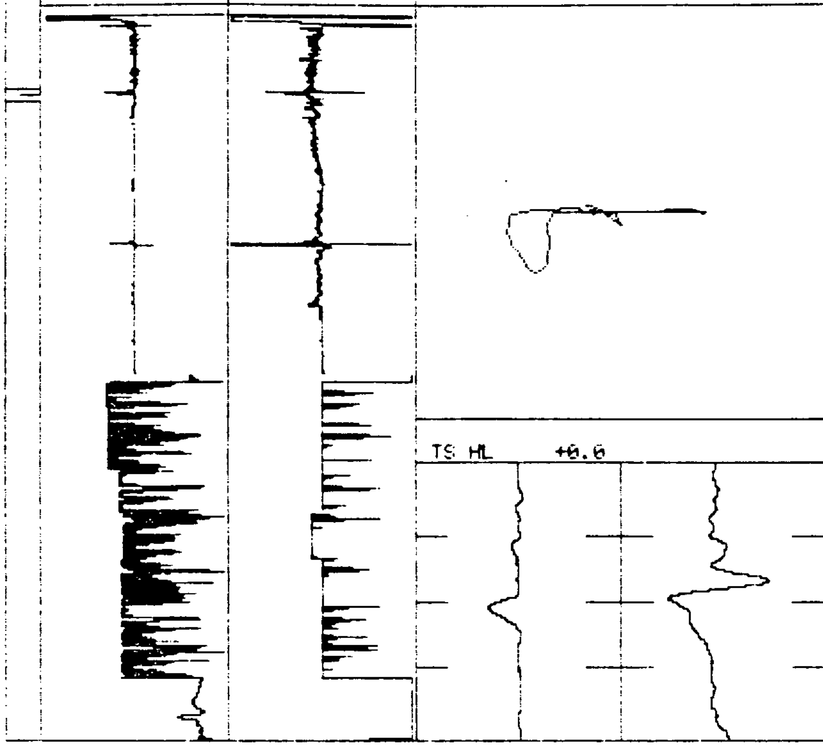


ID 10 ROW 13 COL 41
CHANNEL 1 DIFF
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 200 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 400 kHz
SPAN ----- 550
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 12
SPAN ----- 1024
ROTATION - 20 DEG
MIX 2 (6) <--
CHANNELS 34
SPAN ----- 1024
ROTATION - 0 DEG

20	PLANT	UNIT#	S/G	LEG	DATE
	SCE SONGS I	I	A	INLET	00/00/77

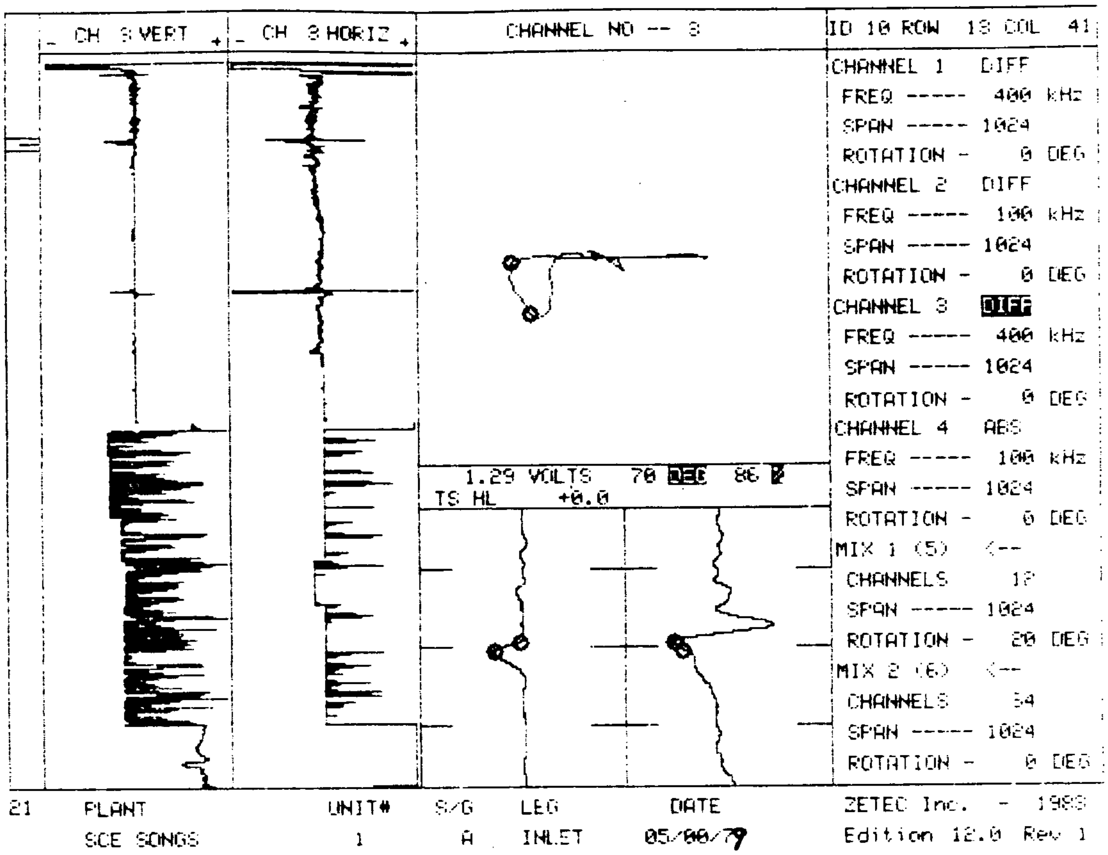
ZETEC Inc. - 1988
Edition 12.0 Rev 1

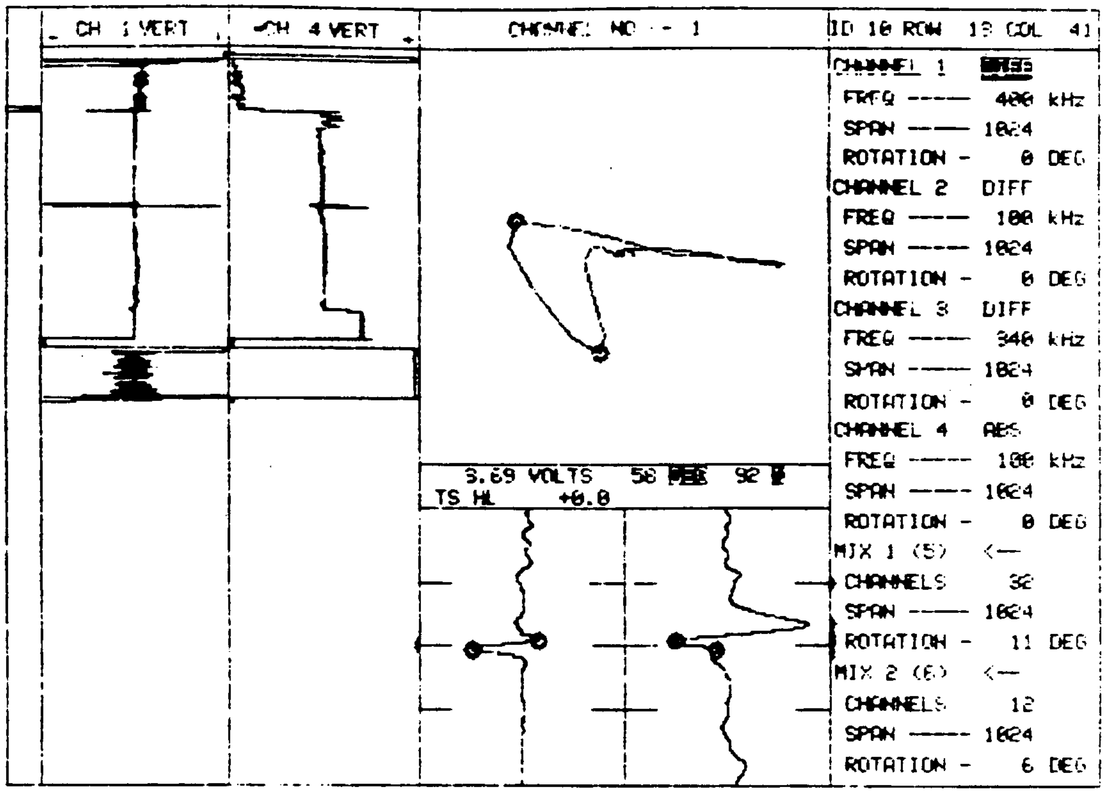
CH 3 VERT	CH 3 HORIZ	CHANNEL NO -- 3	ID 10 ROW 13 COL 41



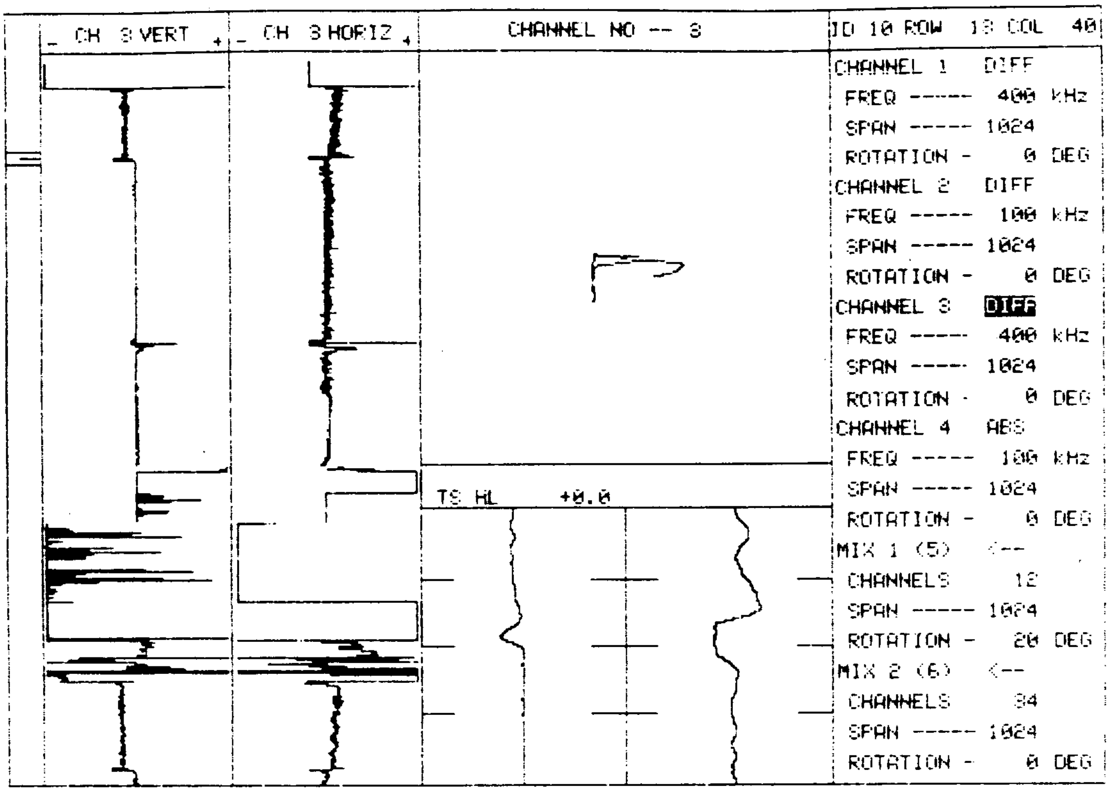
CHANNEL 1 DIFF
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 12
SPAN ----- 1024
ROTATION - 20 DEG
MIX 2 (6) <--
CHANNELS 34
SPAN ----- 1024
ROTATION - 0 DEG

21	PLANT	UNIT#	S/G	LEG	DATE	ZETEC Inc. - 1988
	SCE SONGS	1	A	INLET	05/00/79	Edition 12.0 Rev 1

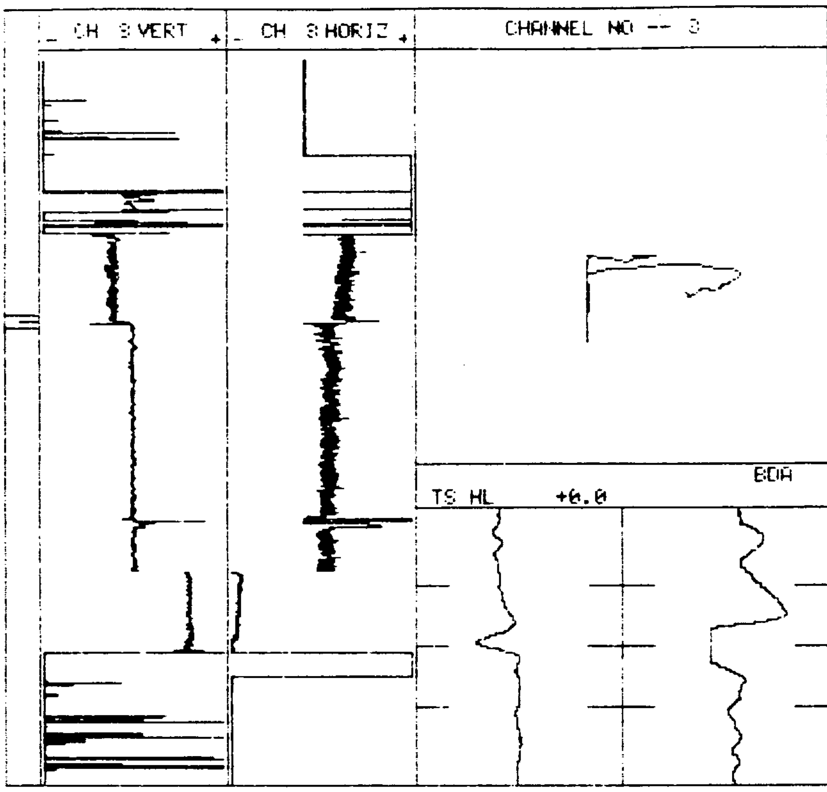

CH 3 VERT
CH 3 HORIZ
CHANNEL NO -- 3
ID 10 ROW 13 COL 41
CHANNEL 1 DIFF
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 12
SPAN ----- 1024
ROTATION - 20 DEG
MIX 2 (6) <--
CHANNELS 34
SPAN ----- 1024
ROTATION - 0 DEG
1.29 VOLTS 70 DEG 86
TS HL +0.0
21 PLANT UNIT# S/G LEG DATE
SCE SONGS 1 A INLET 05/00/79
ZETEC Inc. - 1983
Edition 12.0 Rev 1



34	PLANT	UNIT#	S/G	LEG	DATE	ZETEC Inc. - 1983
	SCE SONGS I	1	"A"	INLET	05/25/80	Edition 12.0 Rev 1



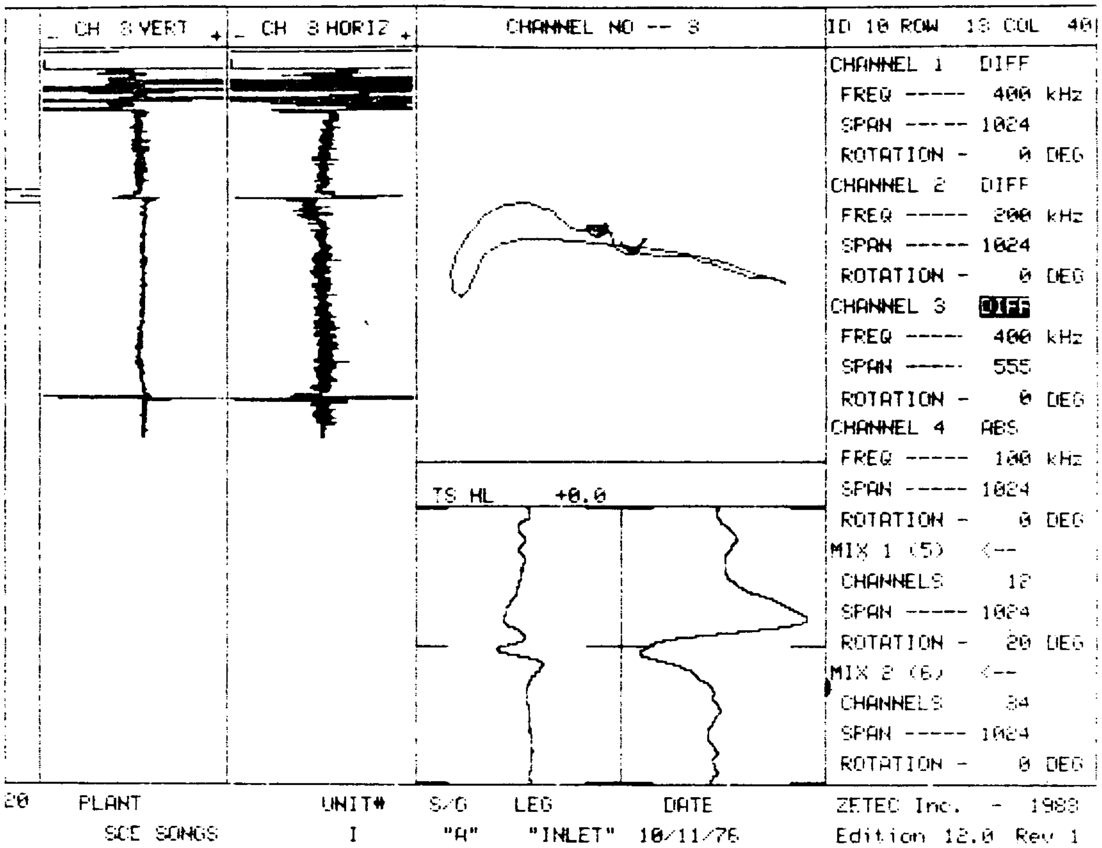
21	PLANT	UNIT#	S/G	LEG	DATE	ZETEC Inc. - 1983
	SCE SONGS	1	A	INLET	05/00/75	Edition 12.0 Rev 1

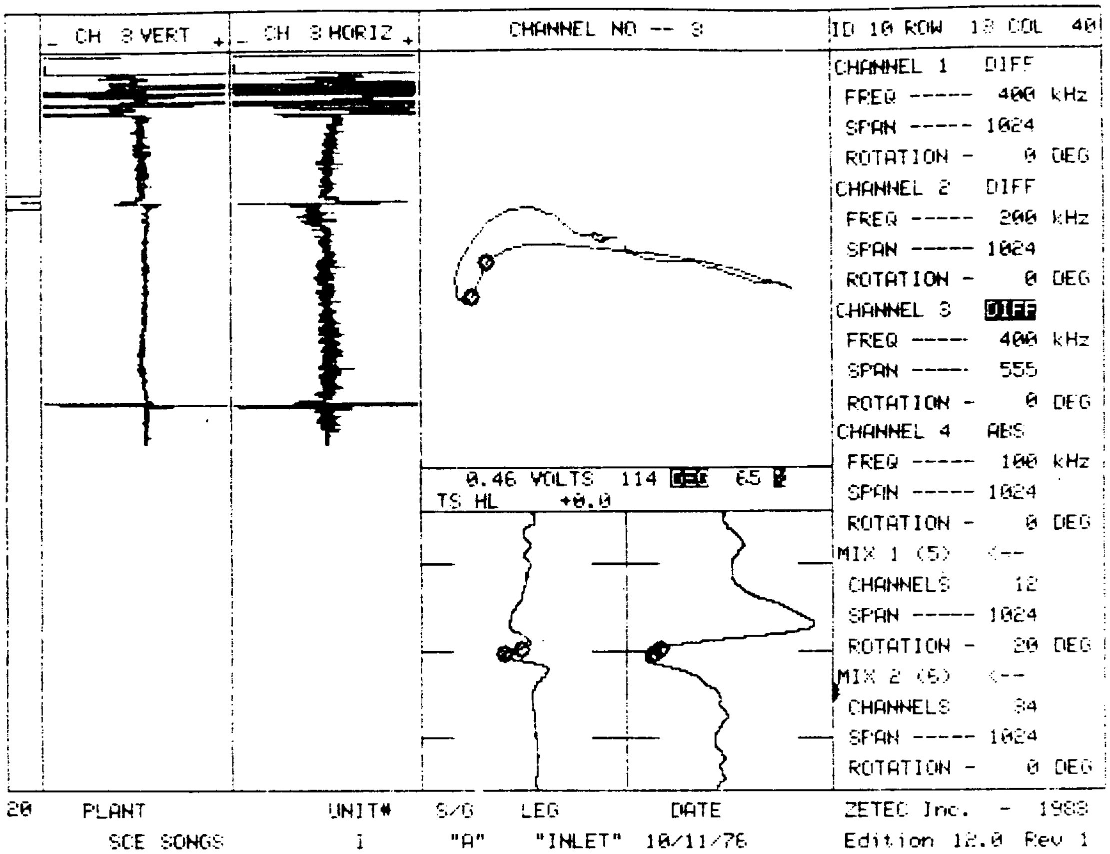


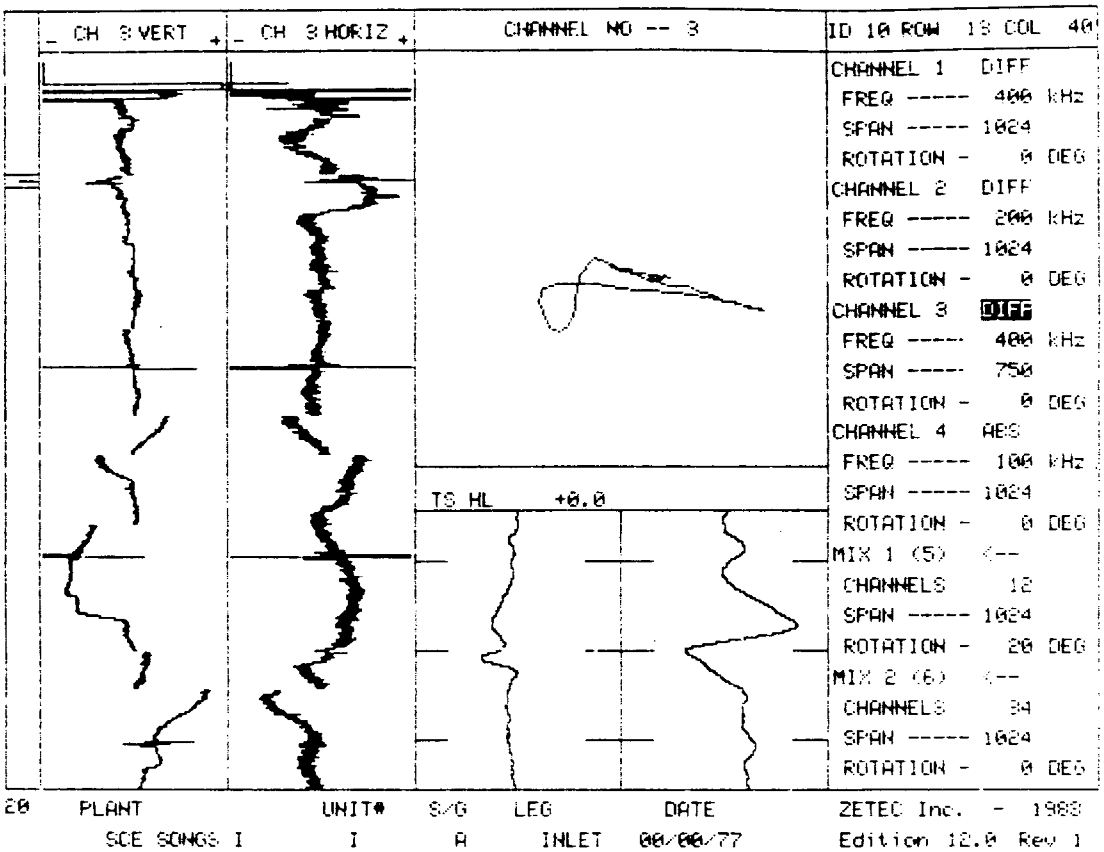
ID 10 ROW 13 COL 40

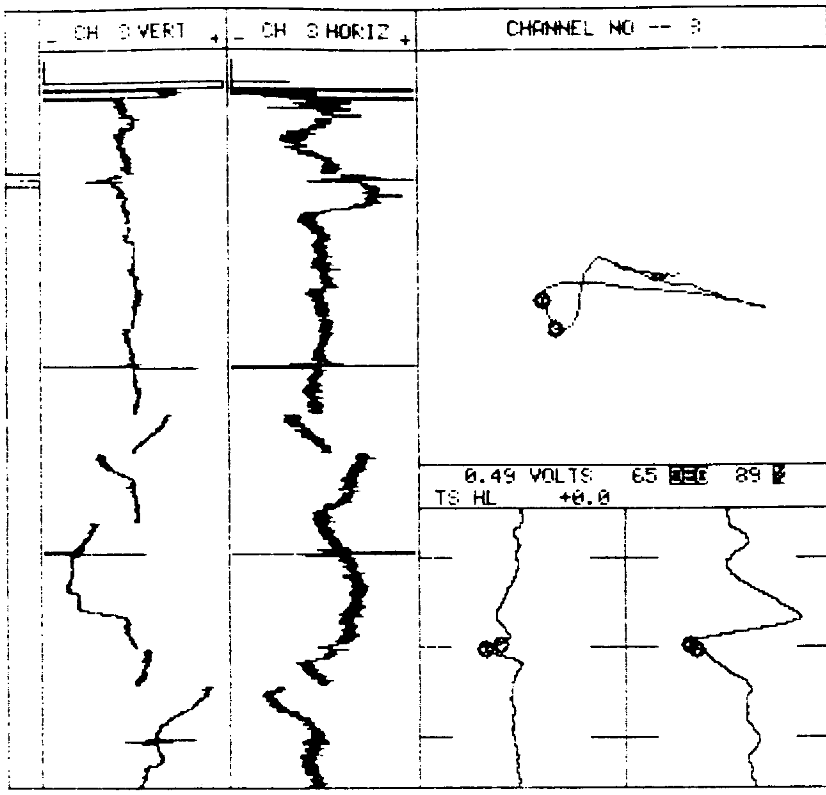
CHANNEL 1 DIFF
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 200 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 400 kHz
SPAN ----- 595
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 12
SPAN ----- 1024
ROTATION - 20 DEG
MIX 2 (6) <--
CHANNELS 34
SPAN ----- 1024
ROTATION - 0 DEG

20	PLANT	UNIT#	S/G	LEG	DATE	ZETEC Inc. - 1983
	SCE SONGS	I	"A"	"INLET"	04/11/75	Edition 12.0 Rev 1


CH 3 VERT
CH 3 HORIZ
CHANNEL NO -- 3
ID 10 ROW 13 COL 40
CHANNEL 1 DIFF
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 200 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 400 kHz
SPAN ----- 555
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 12
SPAN ----- 1024
ROTATION - 20 DEG
MIX 2 (6) <--
CHANNELS 34
SPAN ----- 1024
ROTATION - 0 DEG
TS HL +0.0
20 PLANT UNIT# S/G LEG DATE
SCE SONGS I "A" "INLET" 10/11/76
ZETEC Inc. - 1983
Edition 12.0 Rev 1


CH 3 VERT
CH 3 HORIZ
CHANNEL NO -- 3
ID 10 ROW 13 COL 40
CHANNEL 1 DIFF
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 200 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 400 kHz
SPAN ----- 555
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 12
SPAN ----- 1024
ROTATION - 20 DEG
MIX 2 (6) <--
CHANNELS 34
SPAN ----- 1024
ROTATION - 0 DEG
0.46 VOLTS 114 DEG 65
TS HL +0.0
20 PLANT UNIT# S/G LEG DATE
SCE SONGS 1 "A" "INLET" 10/11/76
ZETEC Inc. - 1988
Edition 12.0 Rev 1


CH 3 VERT
CH 3 HORIZ
CHANNEL NO -- 3
ID 10 ROW 13 COL 40
CHANNEL 1 DIFF
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 200 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 400 kHz
SPAN ----- 750
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 12
SPAN ----- 1024
ROTATION - 20 DEG
MIX 2 (6) <--
CHANNELS 34
SPAN ----- 1024
ROTATION - 0 DEG
TS HL +0.0
20
PLANT SCE SONGS I
UNIT# I
S/G A
LEG INLET
DATE 00/00/77
ZETEC Inc. - 1983
Edition 12.0 Rev 1



ID 10 ROW 13 COL 40

CHANNEL 1 DIFF
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG

CHANNEL 2 DIFF
FREQ ----- 200 kHz
SPAN ----- 1024
ROTATION - 0 DEG

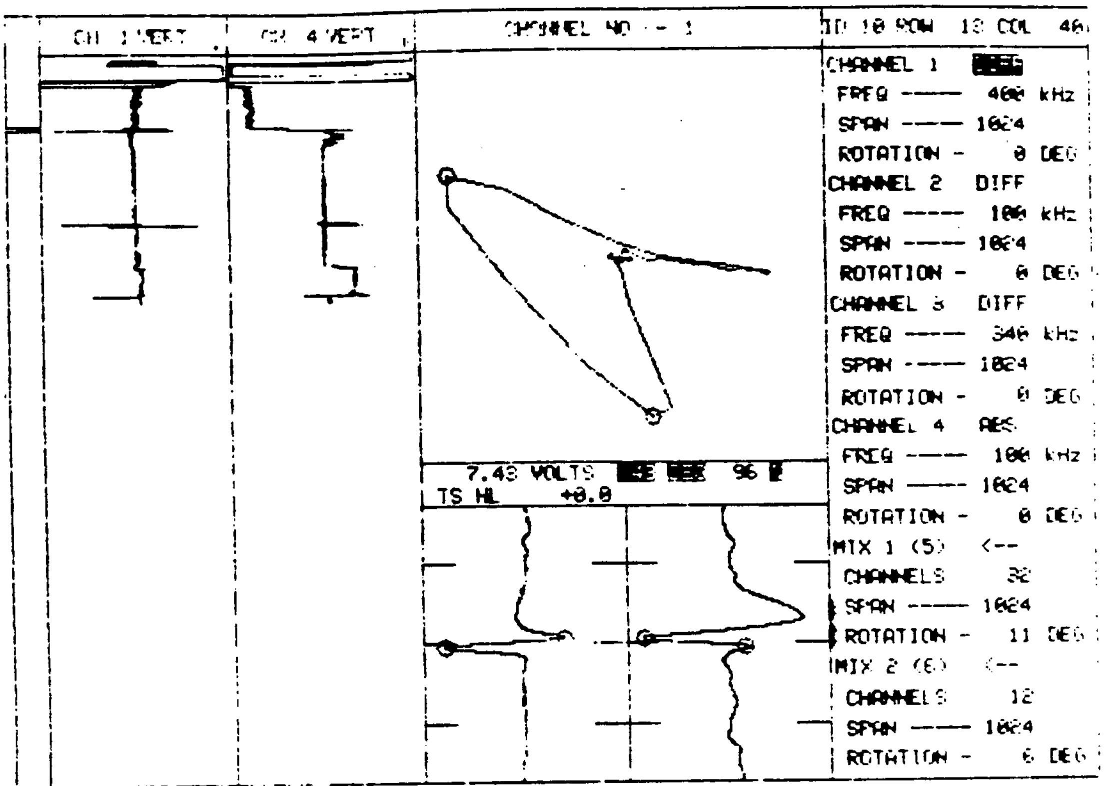
CHANNEL 3 DIFF
FREQ ----- 400 kHz
SPAN ----- 750
ROTATION - 0 DEG

CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG

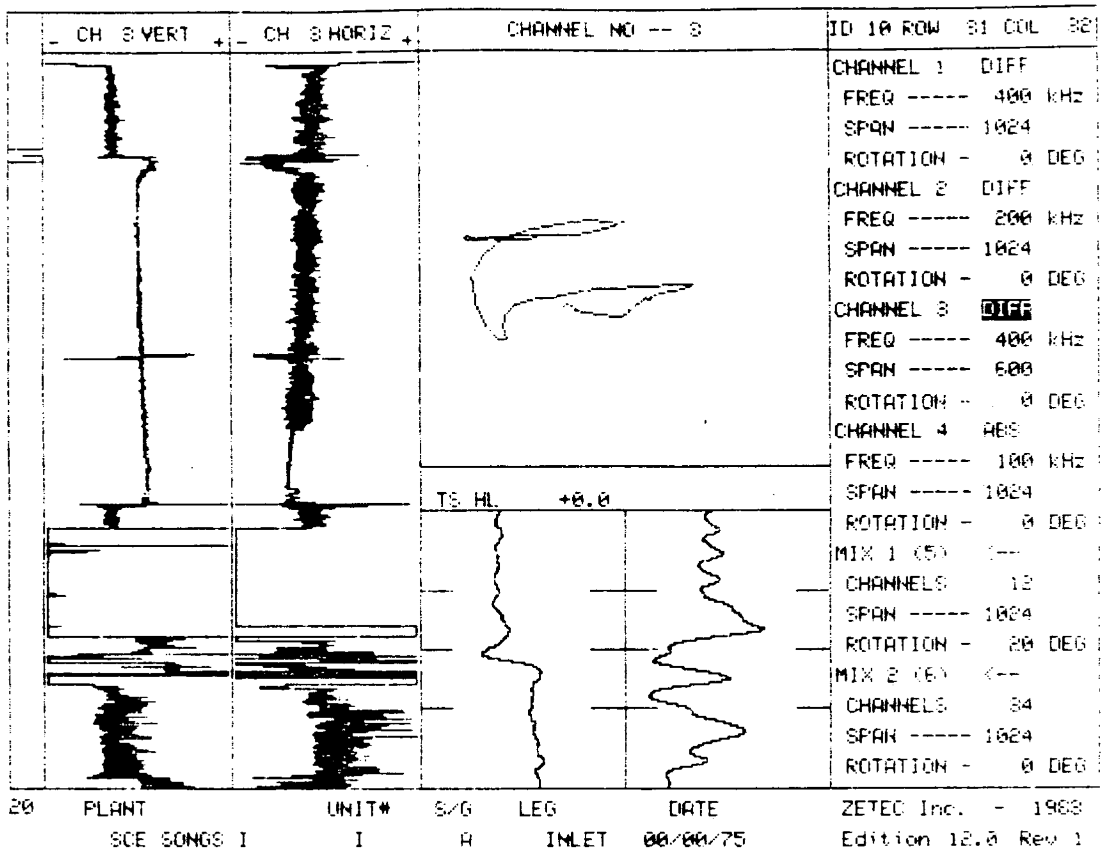
MIX 1 (5) <--
CHANNELS 12
SPAN ----- 1024
ROTATION - 20 DEG

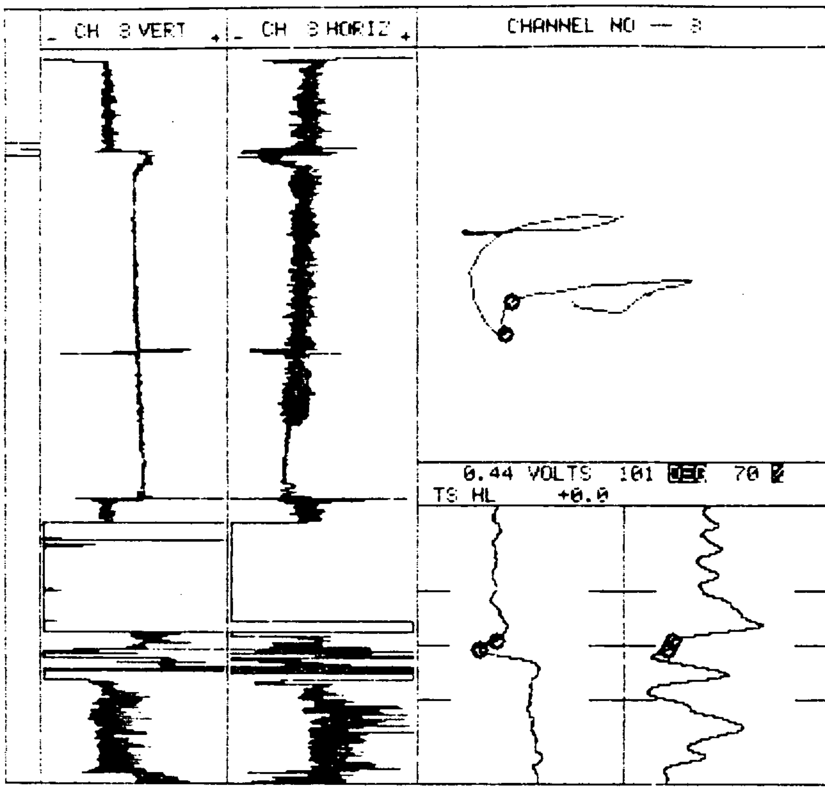
MIX 2 (6) <--
CHANNELS 34
SPAN ----- 1024
ROTATION - 0 DEG

20	PLANT	UNIT#	S/G	LEG	DATE	ZETEC Inc. - 1983
	SCE SONGS I	I	A	INLET	00/00/77	Edition 12.0 Rev 1



34	PLANT	UNIT#	S/G	LEG	DATE	ZETEC Inc. - 1988
	SCE SONGS I	I	"A"	INLET	05/25/88	Edition 12.0 Rev 1

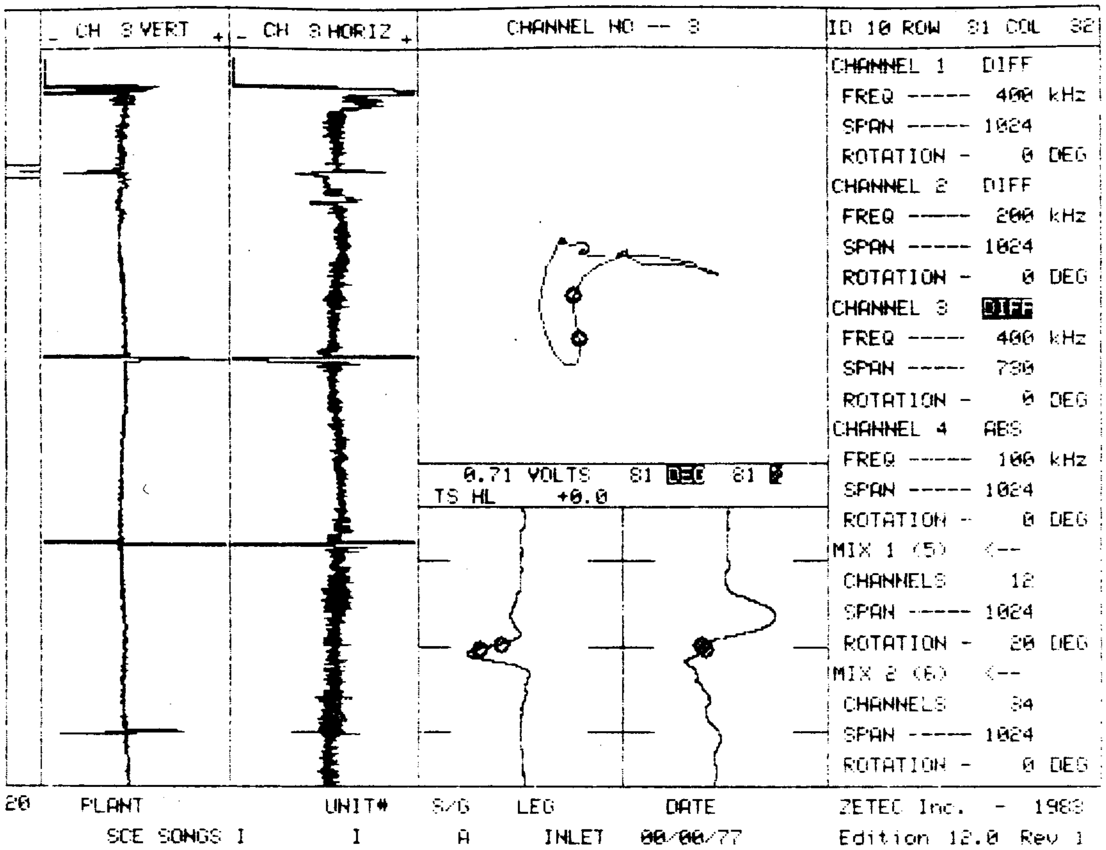

CH 3 VERT
CH 3 HORIZ
CHANNEL NO -- 3
ID 10 ROW 31 COL 32
CHANNEL 1 DIFF
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 200 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 400 kHz
SPAN ----- 600
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 12
SPAN ----- 1024
ROTATION - 20 DEG
MIX 2 (6) <--
CHANNELS 34
SPAN ----- 1024
ROTATION - 0 DEG
TS HL +0.0
20 PLANT UNIT# S/G LEG DATE ZETEC Inc. - 1983
SCE SONGS I I A INLET 00/00/75 Edition 12.0 Rev 1



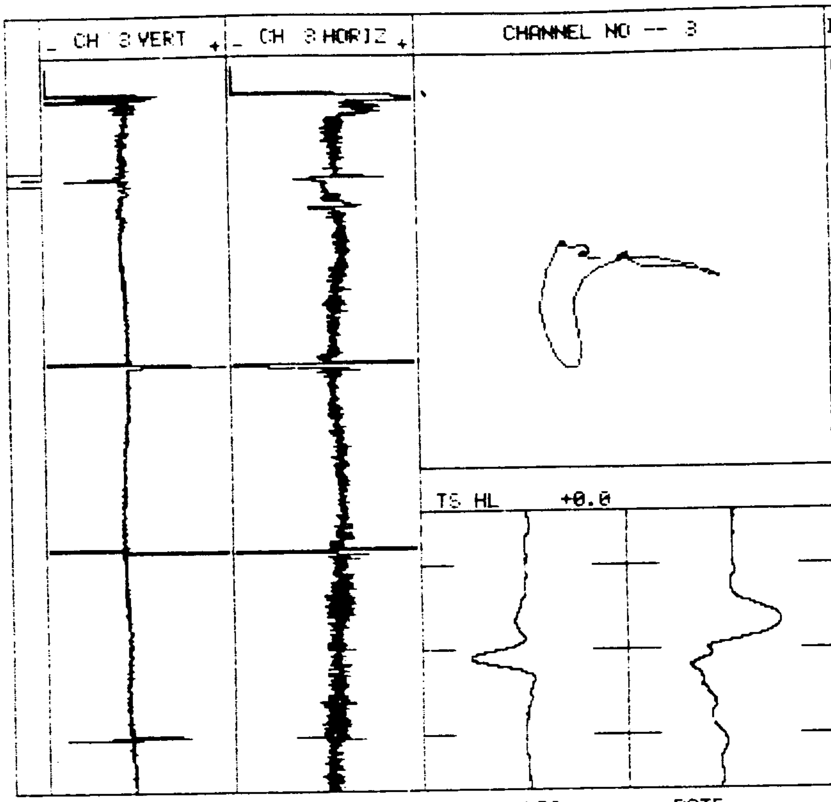
ID 10 ROW 31 COL 32

CHANNEL 1 DIFF
FREQ ------ 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ------ 200 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ------ 400 kHz
SPAN ----- 600
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ------ 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 12
SPAN ----- 1024
ROTATION - 20 DEG
MIX 2 (6) <--
CHANNELS 34
SPAN ----- 1024
ROTATION - 0 DEG

20	PLANT	UNIT#	S/G	LEG	DATE	ZETEC Inc. - 1988
	SCE SONGS I	I	A	INLET	00/00/75	Edition 12.0 Rev 1



CH 3 VERT
CH 3 HORIZ
CHANNEL NO -- 3
ID 10 ROW 81 COL 82
CHANNEL 1 DIFF
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 200 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 400 kHz
SPAN ----- 730
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 12
SPAN ----- 1024
ROTATION - 20 DEG
MIX 2 (6) <--
CHANNELS 34
SPAN ----- 1024
ROTATION - 0 DEG
0.71 VOLTS 81 DEG 81 Ø
TS HL +0.0
20 PLANT UNIT# S/G LEG DATE
SCE SONGS I I A INLET 00/00/77
ZETEC Inc. - 1983
Edition 12.0 Rev 1

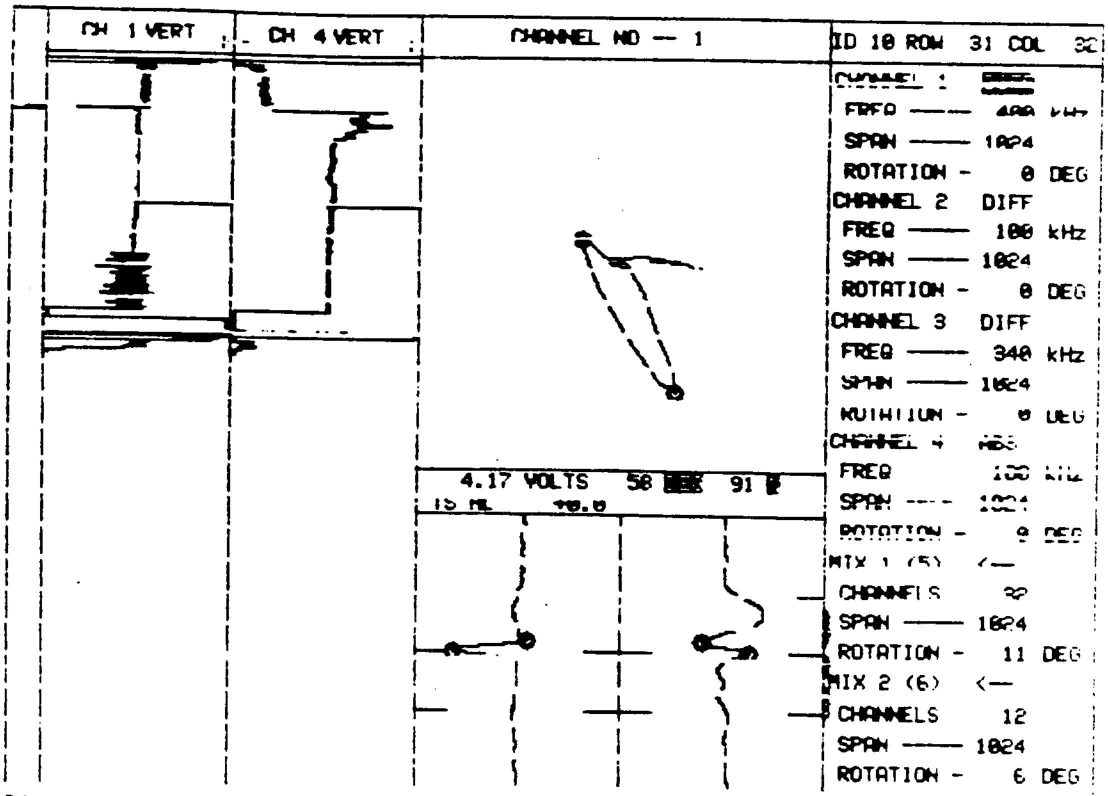


ID 10 ROW 31 COL 32

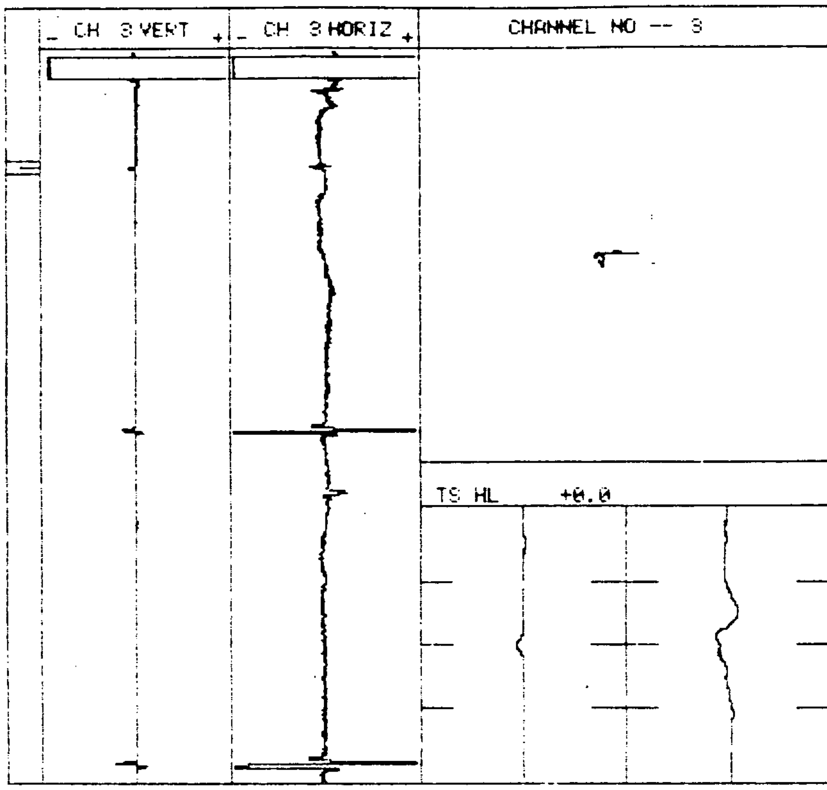
CHANNEL 1 DIFF
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 200 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 400 kHz
SPAN ----- 730
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 12
SPAN ----- 1024
ROTATION - 20 DEG
MIX 2 (6) <--
CHANNELS 34
SPAN ----- 1024
ROTATION - 0 DEG

20	PLANT	UNIT#	S/G	LEG	DATE
	SCE SONGS I	I	A	INLET	00/00/77

ZETEC Inc. - 1988
Edition 12.0 Rev 1

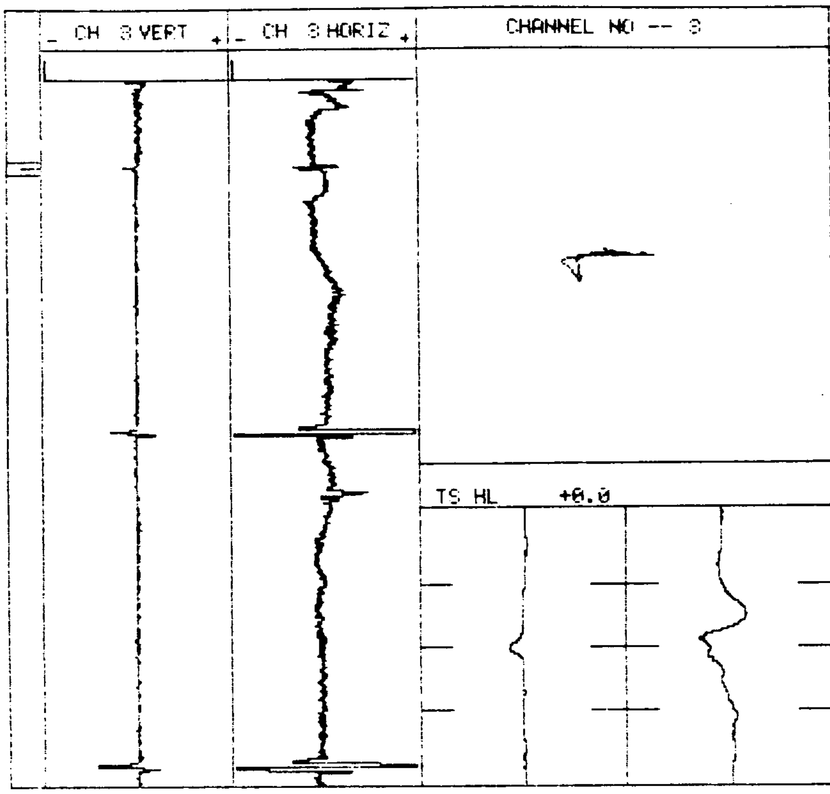


34 PLANT UNIT# S/G LEG DATE ZETEC Inc. - 1983
SCE SONGS I I A INLET 05/25/88 Edition 12.0 Rev 1



ID 10 ROW 33 COL 31
CHANNEL 1 DIFF
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 12
SPAN ----- 1024
ROTATION - 20 DEG
MIX 2 (6) <--
CHANNELS 34
SPAN ----- 1024
ROTATION - 0 DEG

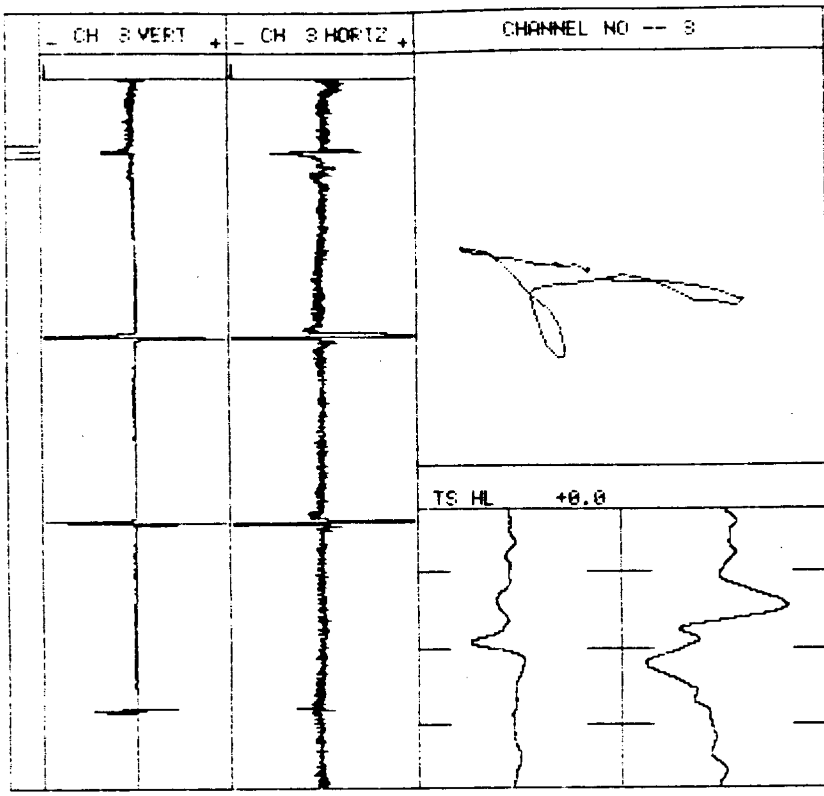
21	PLANT	UNIT#	S/G	LEG	DATE	ZETEC Inc. - 1983
	SCE SONGS	1	A	INLET	05/00/73	Edition 12.0 Rev 1



ID 10 ROW 33 COL 31

CHANNEL 1 DIFF
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 400 kHz
SPAN ----- 524
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 12
SPAN ----- 1024
ROTATION - 20 DEG
MIX 2 (6) <--
CHANNELS 34
SPAN ----- 1024
ROTATION - 0 DEG

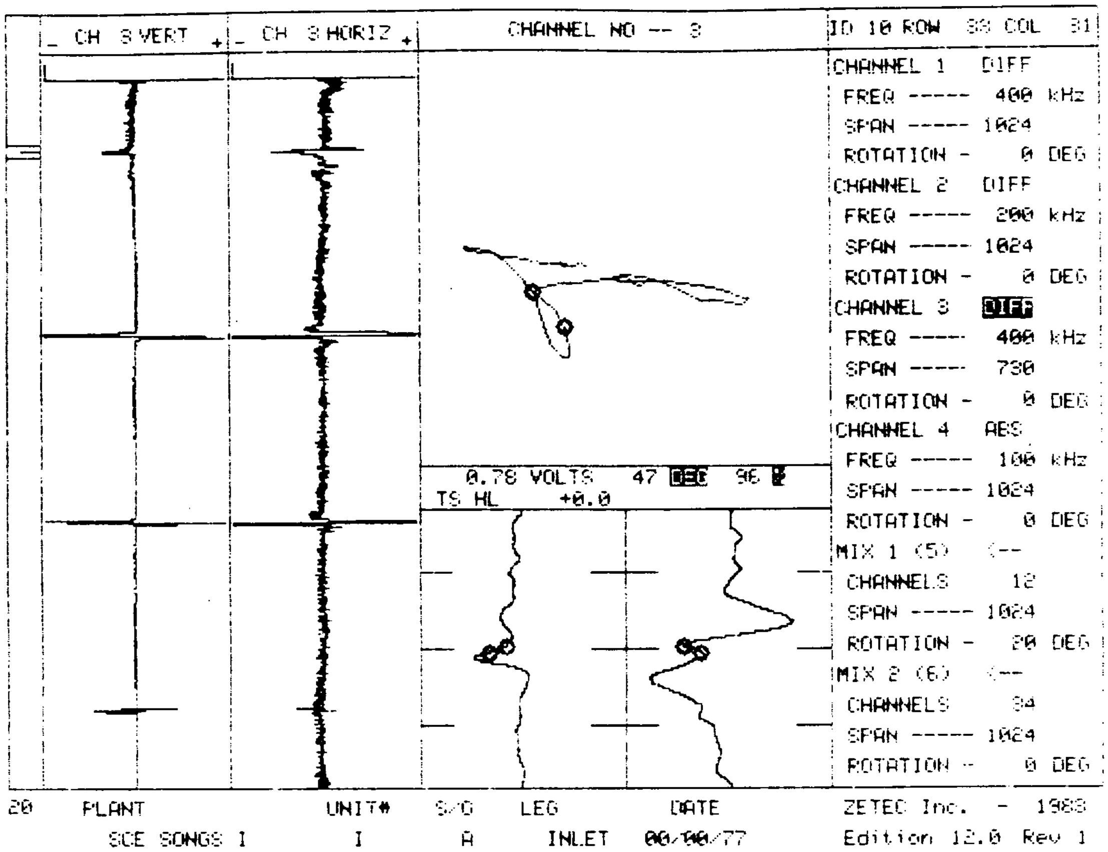
21	PLANT	UNIT#	S/G	LEG	DATE	ZETEC Inc. - 1988
	SCE SONGS	1	A	INLET	05/00/79	Edition 12.0 Rev 1

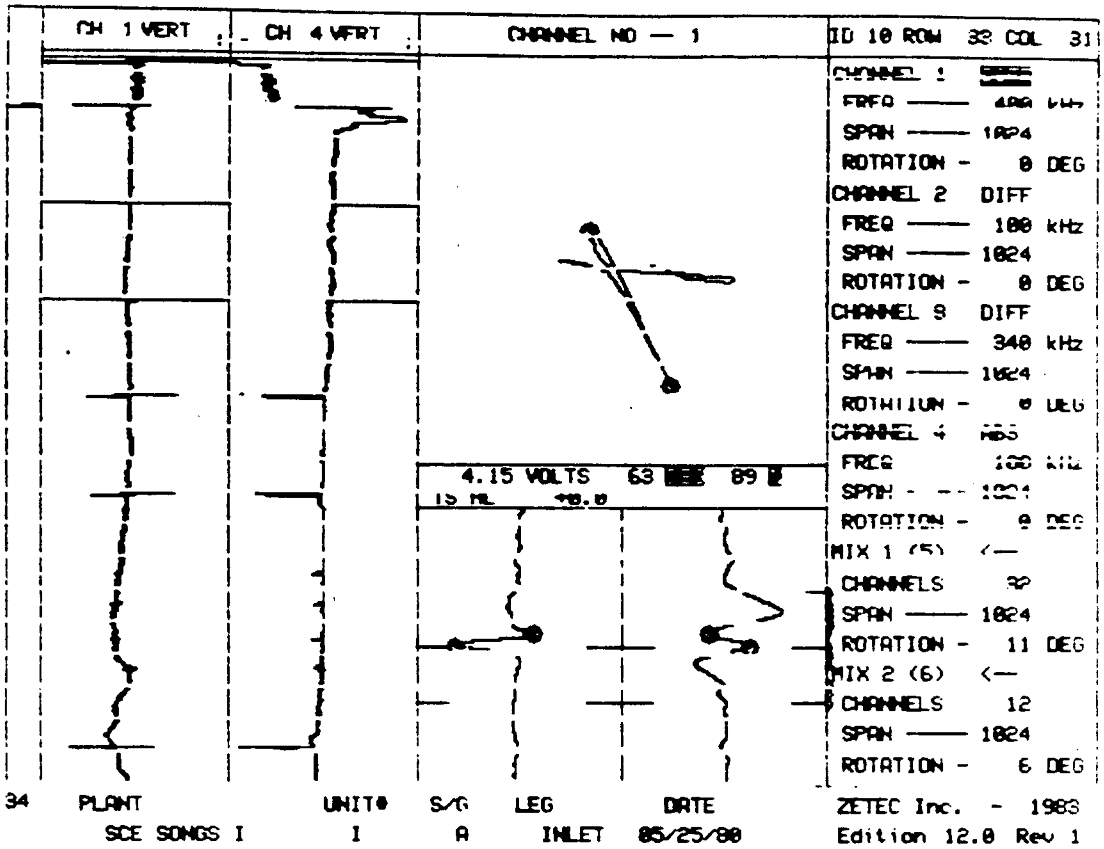


ID 10 ROW 33 COL 31

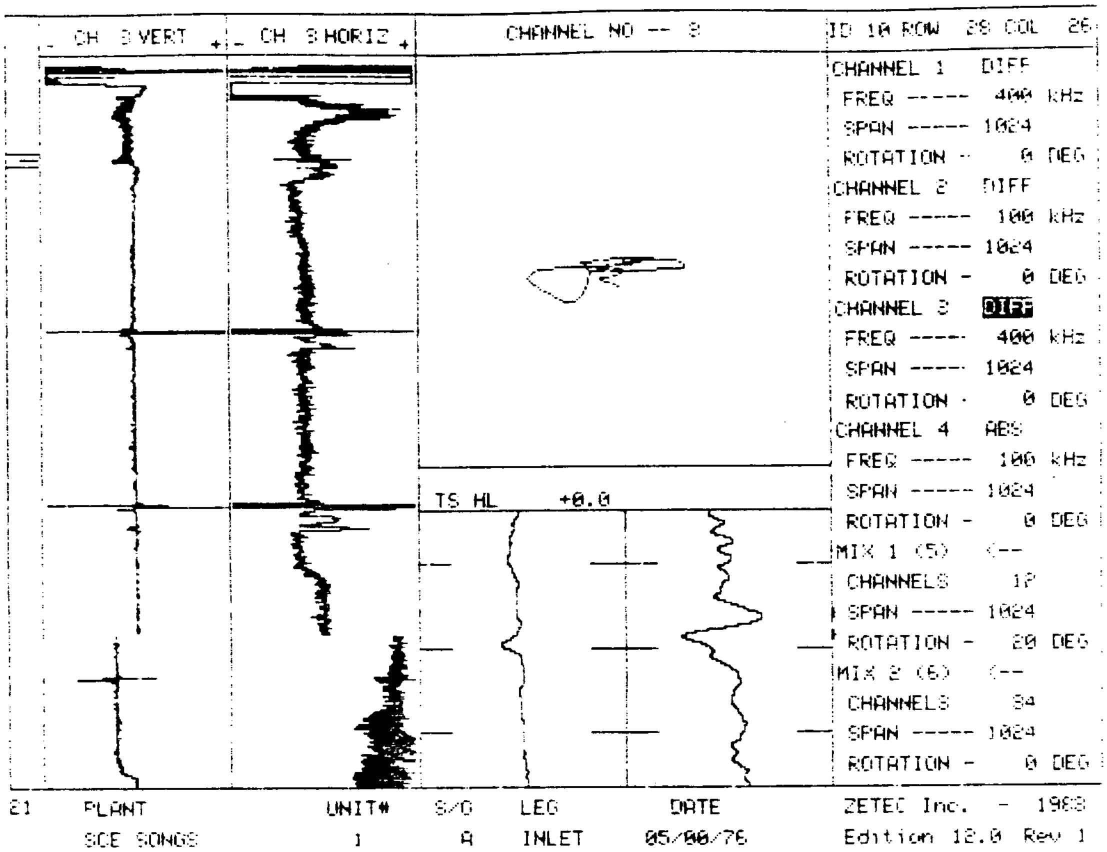
CHANNEL 1 DIFF
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 200 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 400 kHz
SPAN ----- 730
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 12
SPAN ----- 1024
ROTATION - 20 DEG
MIX 2 (6) <--
CHANNELS 34
SPAN ----- 1024
ROTATION - 0 DEG

20 PLANT	UNIT#	S/G	LEG	DATE	ZETEC Inc. - 1983
SCE SONGS I	I	A	INLET	00/00/77	Edition 12.0 Rev 1

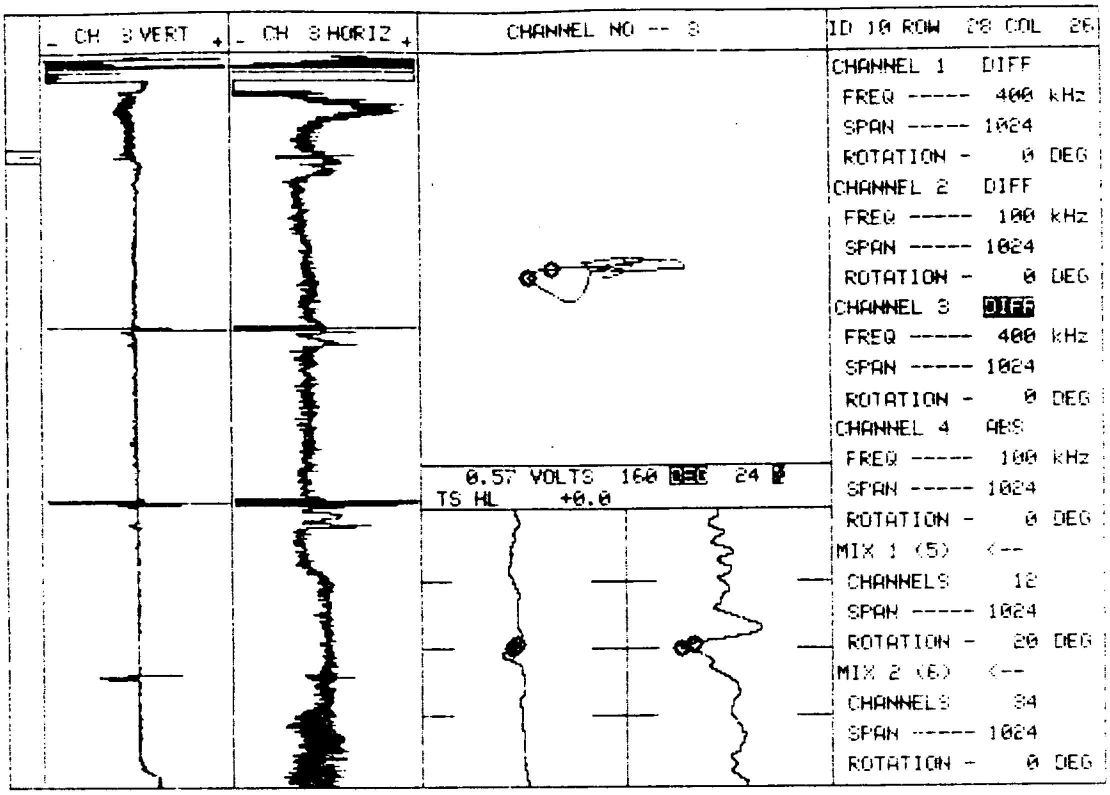

CH 3 VERT
CH 3 HORIZ
CHANNEL NO -- 3
ID 10 ROW 33 COL 31
CHANNEL 1 DIFF
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 200 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 400 kHz
SPAN ----- 730
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 12
SPAN ----- 1024
ROTATION - 20 DEG
MIX 2 (6) <--
CHANNELS 34
SPAN ----- 1024
ROTATION - 0 DEG
0.78 VOLTS 47 DEG 96
TS HL +0.0
20 PLANT UNIT# S/G LEG DATE
SCE SONGS I I A INLET 00/00/77
ZETEC Inc. - 1983
Edition 12.0 Rev 1



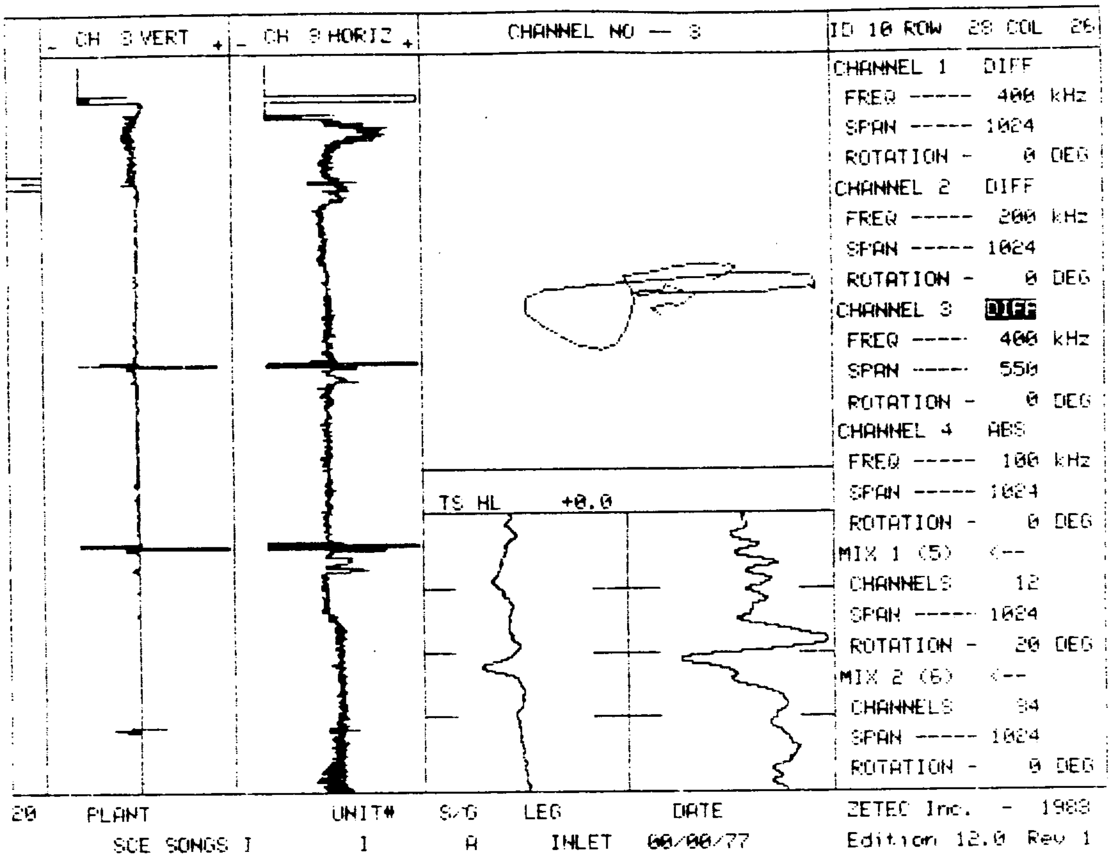
CH 1 VERT
CH 4 VERT
CHANNEL NO — 1
ID 10 ROW 33 COL 31
CHANNEL 1
SPAN —— 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ —— 100 kHz
SPAN —— 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ —— 340 kHz
SPAN —— 1024
CHANNEL 4
FREQ
SPAN
ROTATION
4.15 VOLTS 63 89
MIX 1 (5) <—
CHANNELS 32
SPAN —— 1024
ROTATION - 11 DEG
MIX 2 (6) <—
CHANNELS 12
SPAN —— 1024
ROTATION - 6 DEG
34
PLANT UNIT# S/G LEG DATE
SCE SONGS I I A INLET 05/25/80
ZETEC Inc. - 1983
Edition 12.0 Rev 1



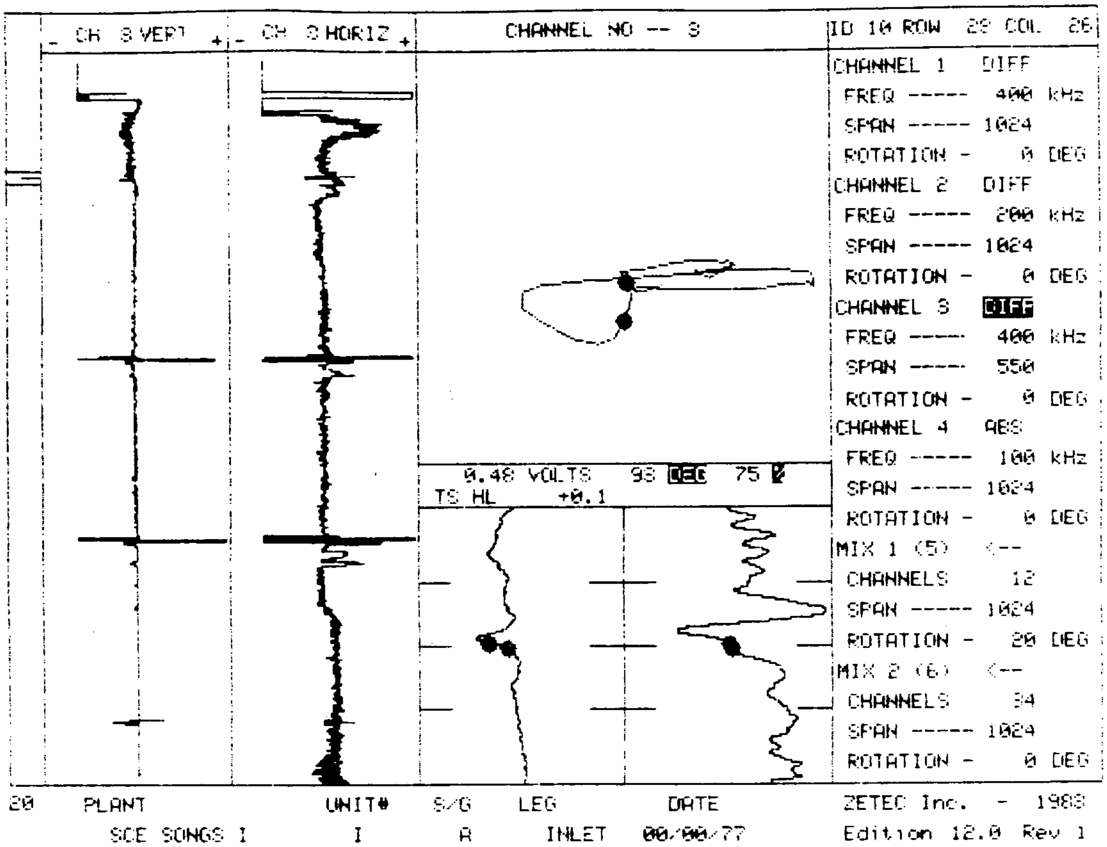
CH 3 VERT
CH 3 HORIZ
CHANNEL NO -- 3
ID 10 ROW 29 COL 26
CHANNEL 1 DIFF
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 12
SPAN ----- 1024
ROTATION - 20 DEG
MIX 2 (6) <--
CHANNELS 34
SPAN ----- 1024
ROTATION - 0 DEG
TS HL +0.0
21 PLANT UNIT# S/G LEG DATE
SCE SONGS 1 A INLET 05/00/76
ZETEC Inc. - 1983
Edition 12.0 Rev 1



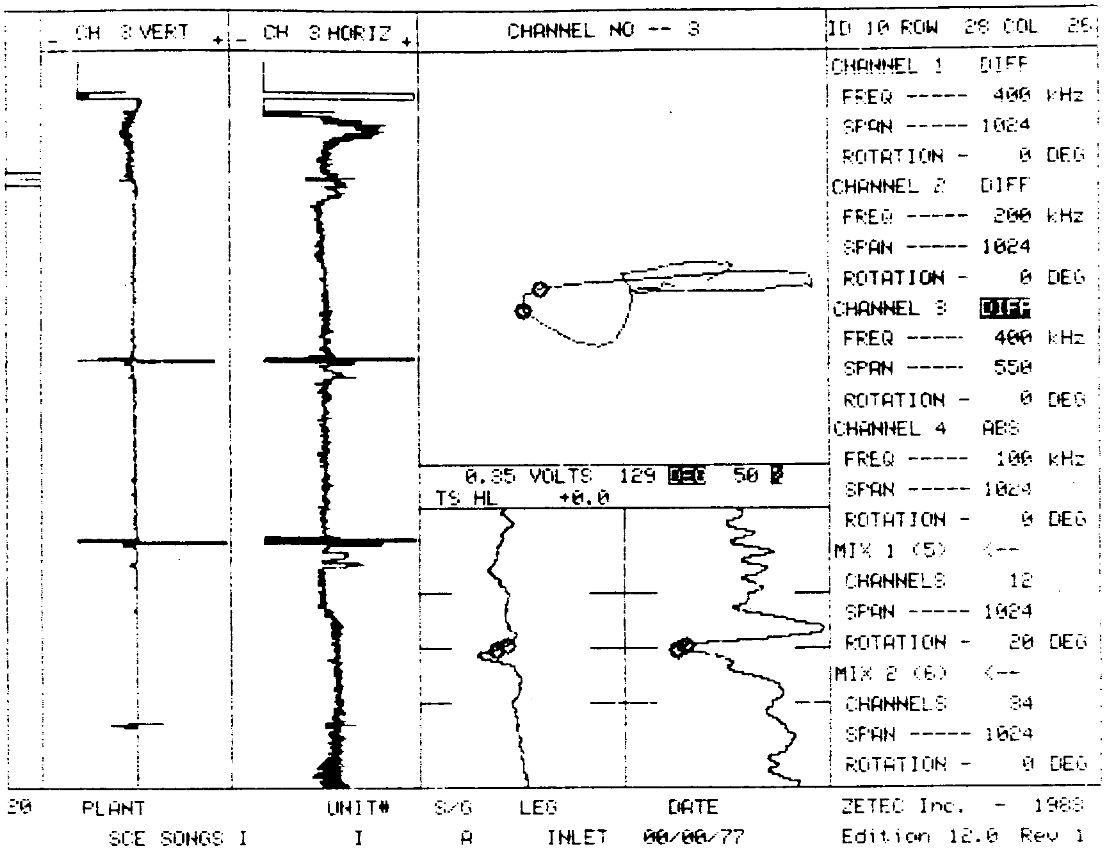
21	PLANT	UNIT#	S/G	LEG	DATE	ZETEC Inc. - 1983
	SCE SONGS	1	A	INLET	05/00/76	Edition 12.0 Rev 1

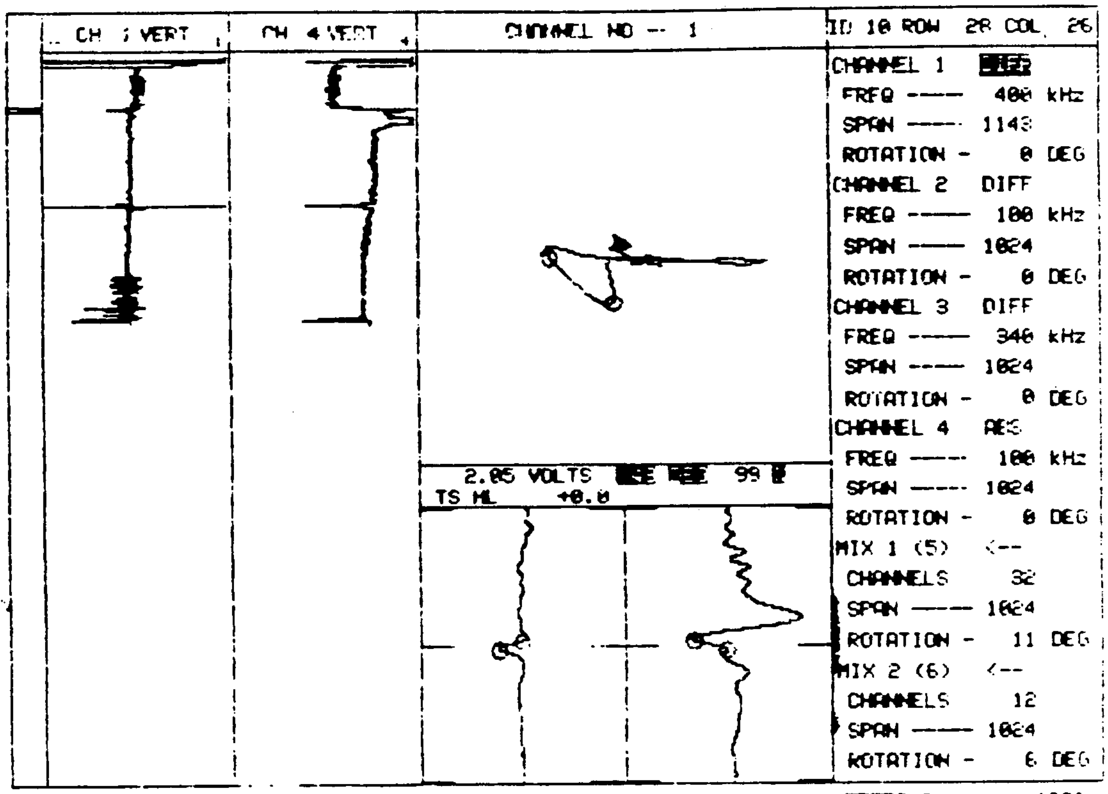


CH 3 VERT
CH 3 HORIZ
CHANNEL NO — 3
ID 10 ROW 29 COL 26
CHANNEL 1 DIFF
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 200 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 400 kHz
SPAN ----- 550
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 12
SPAN ----- 1024
ROTATION - 20 DEG
MIX 2 (6) <--
CHANNELS 34
SPAN ----- 1024
ROTATION - 0 DEG
TS HL +0.0
20 PLANT UNIT# S/G LEG DATE
SCE SONGS I 1 A INLET 00/00/77
ZETEC Inc. - 1983
Edition 12.0 Rev 1

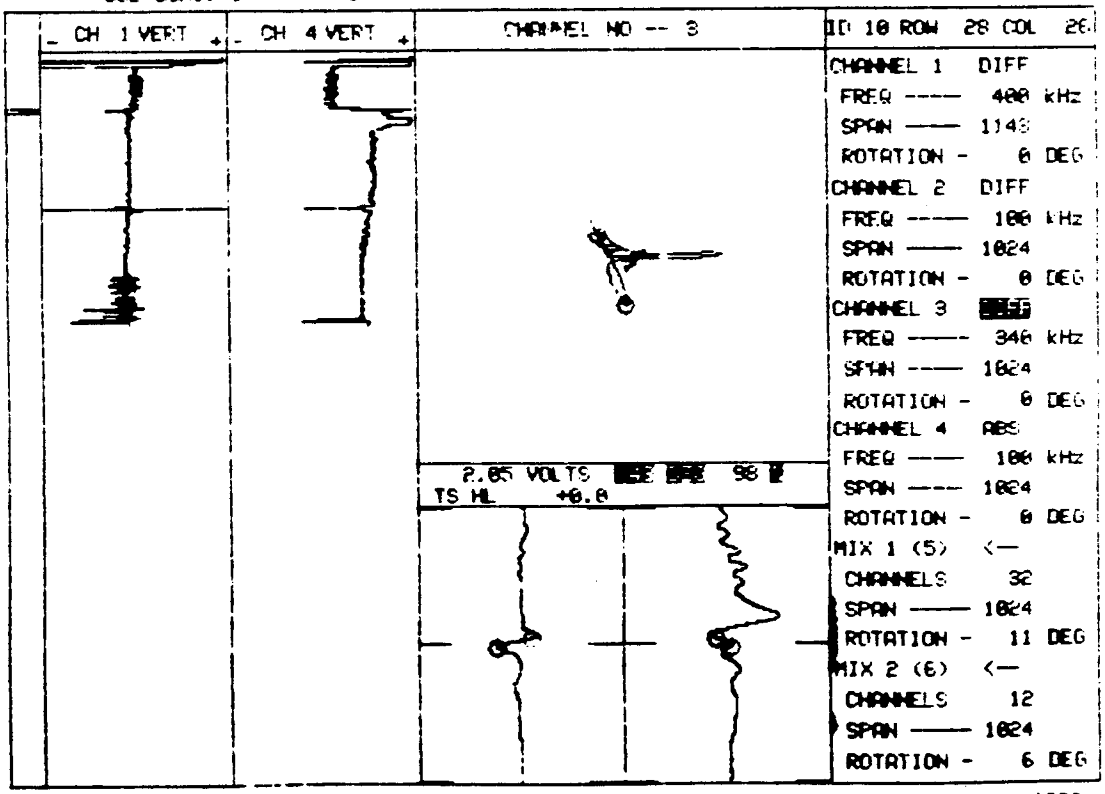


- CH 3 VERT +
- CH 3 HORIZ +
CHANNEL NO -- 3
ID 10 ROW 29 COL 26
CHANNEL 1 DIFF
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 200 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 400 kHz
SPAN ----- 550
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 12
SPAN ----- 1024
ROTATION - 20 DEG
MIX 2 (6) <--
CHANNELS 34
SPAN ----- 1024
ROTATION - 0 DEG
0.48 VOLTS 93 DEG 75 %
TS HL +0.1
20
PLANT SCE SONGS I
UNIT# I
S/G A
LEG INLET
DATE 00/00/77
ZETEC Inc. - 1983
Edition 12.0 Rev 1

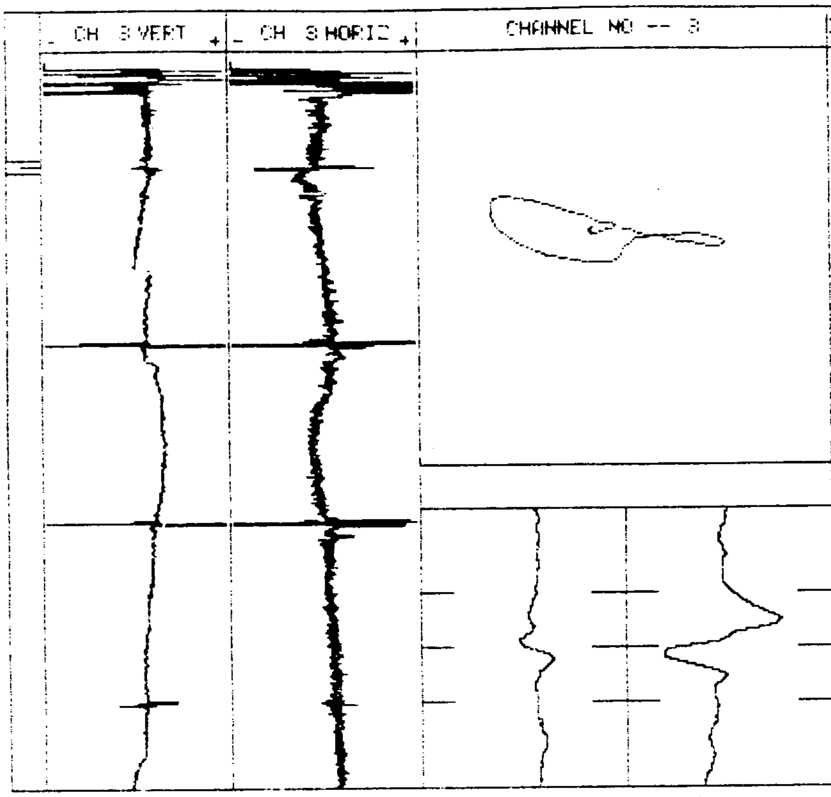

CH 3 VERT
CH 3 HORIZ
CHANNEL NO -- 3
ID 10 ROW 29 COL 25
CHANNEL 1 DIFF
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 200 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 400 kHz
SPAN ----- 550
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 12
SPAN ----- 1024
ROTATION - 20 DEG
MIX 2 (6) <--
CHANNELS 34
SPAN ----- 1024
ROTATION - 0 DEG
0.35 VOLTS 129 DEG 50 %
TS HL +0.0
20 PLANT UNIT# S/G LEG DATE
SCE SONGS I I A INLET 00/00/77
ZETEC Inc. - 1988
Edition 12.0 Rev 1



34 PLANT UNIT# S/G LEG DATE ZETEC Inc. - 1983
SCE SONGS I I "A" INLET 05/25/80 Edition 12.0 Rev 1



34 PLANT UNIT# S/G LEG DATE ZETEC Inc. - 1983
SCE SONGS I I "A" INLET 05/25/80 Edition 12.0 Rev 1



ID 10 ROW 36 COL 57

CHANNEL 1 DIFF
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG

CHANNEL 2 DIFF
FREQ ----- 200 kHz
SPAN ----- 1024
ROTATION - 0 DEG

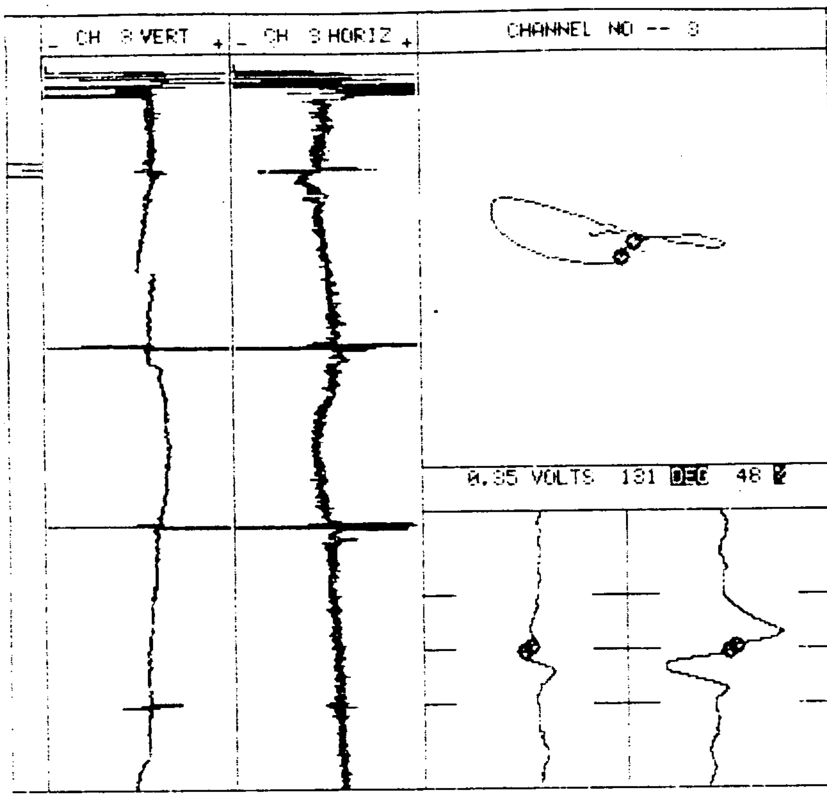
CHANNEL 3 DIFF
FREQ ----- 400 kHz
SPAN ----- 700
ROTATION - 0 DEG

CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG

MIX 1 (5) <--
CHANNELS 12
SPAN ----- 1024
ROTATION - 20 DEG

MIX 2 (6) <--
CHANNELS 34
SPAN ----- 1024
ROTATION - 0 DEG

20	PLANT	UNIT#	S/G	LEG	DATE	ZETEC Inc. - 1983
	SCE SONGS	I	"A"	"INLET"	10/11/76	Edition 12.0 Rev 1



ID 10 ROW 36 COL 57

CHANNEL 1 DIFF
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG

CHANNEL 2 DIFF
FREQ ----- 200 kHz
SPAN ----- 1024
ROTATION - 0 DEG

CHANNEL 3 DIFF
FREQ ----- 400 kHz
SPAN ----- 700
ROTATION - 0 DEG

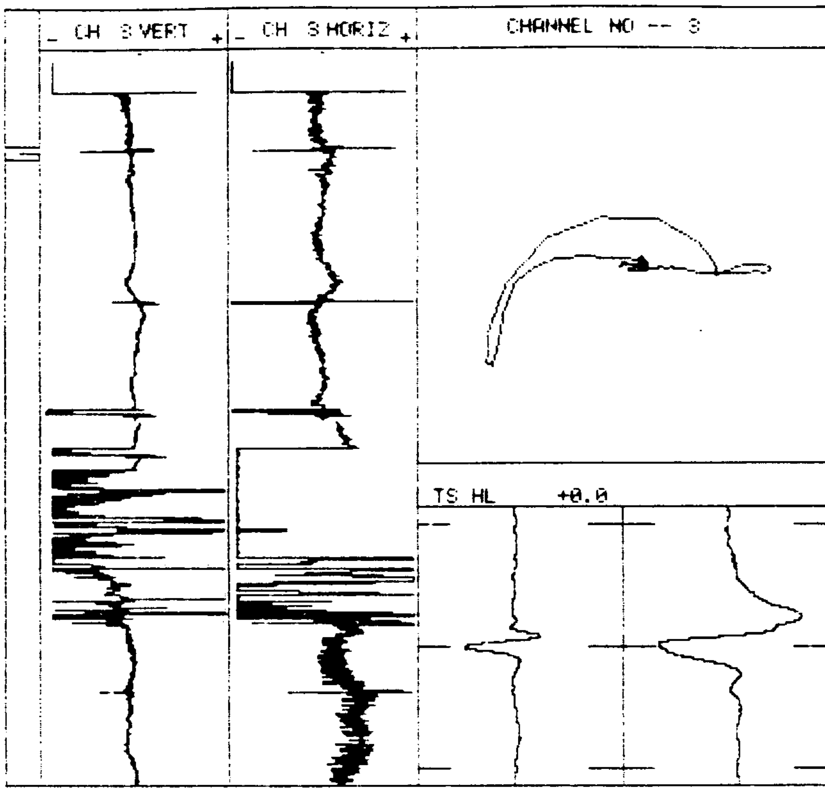
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG

MIX 1 (5) <--
CHANNELS 12
SPAN ----- 1024
ROTATION - 20 DEG

MIX 2 (6) <--
CHANNELS 34
SPAN ----- 1024
ROTATION - 0 DEG

20 PLANT	UNIT#	S/G	LEG	DATE
SCE SONGS	1	"A"	"INLET"	10/11/76

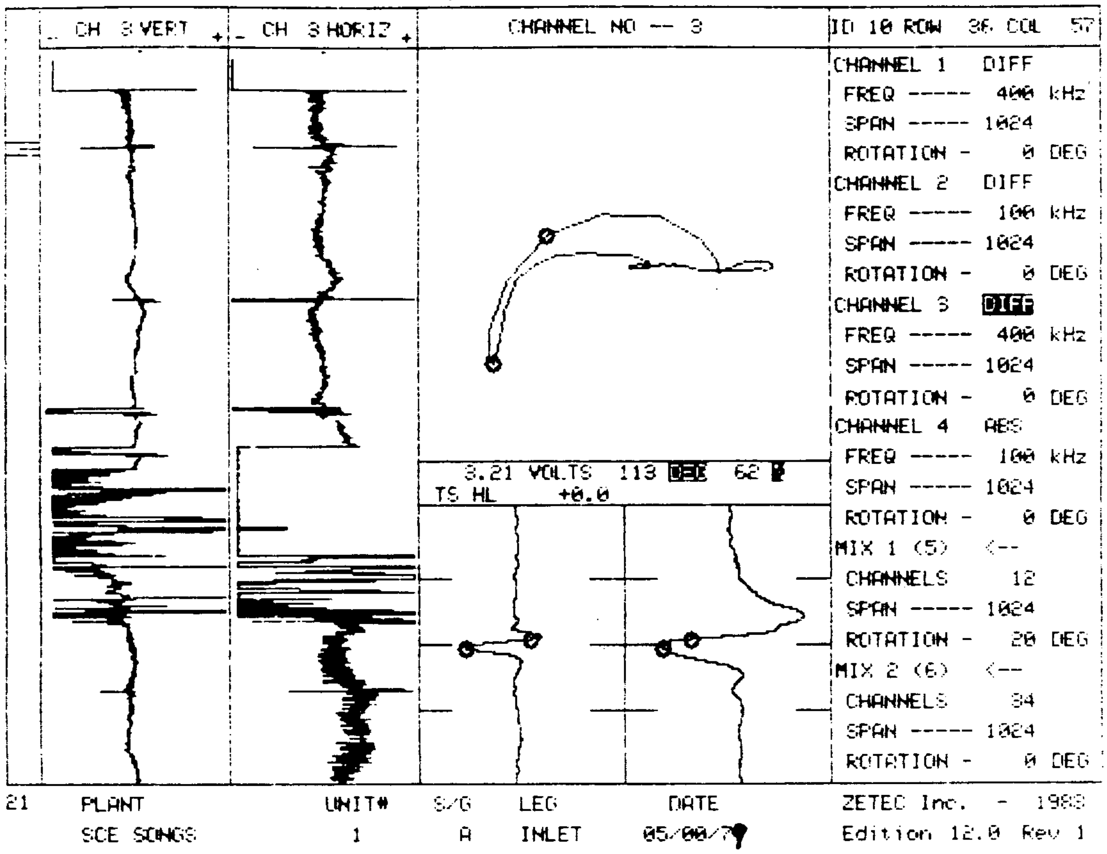
ZETEC Inc. - 1988
Edition 12.0 Rev 1



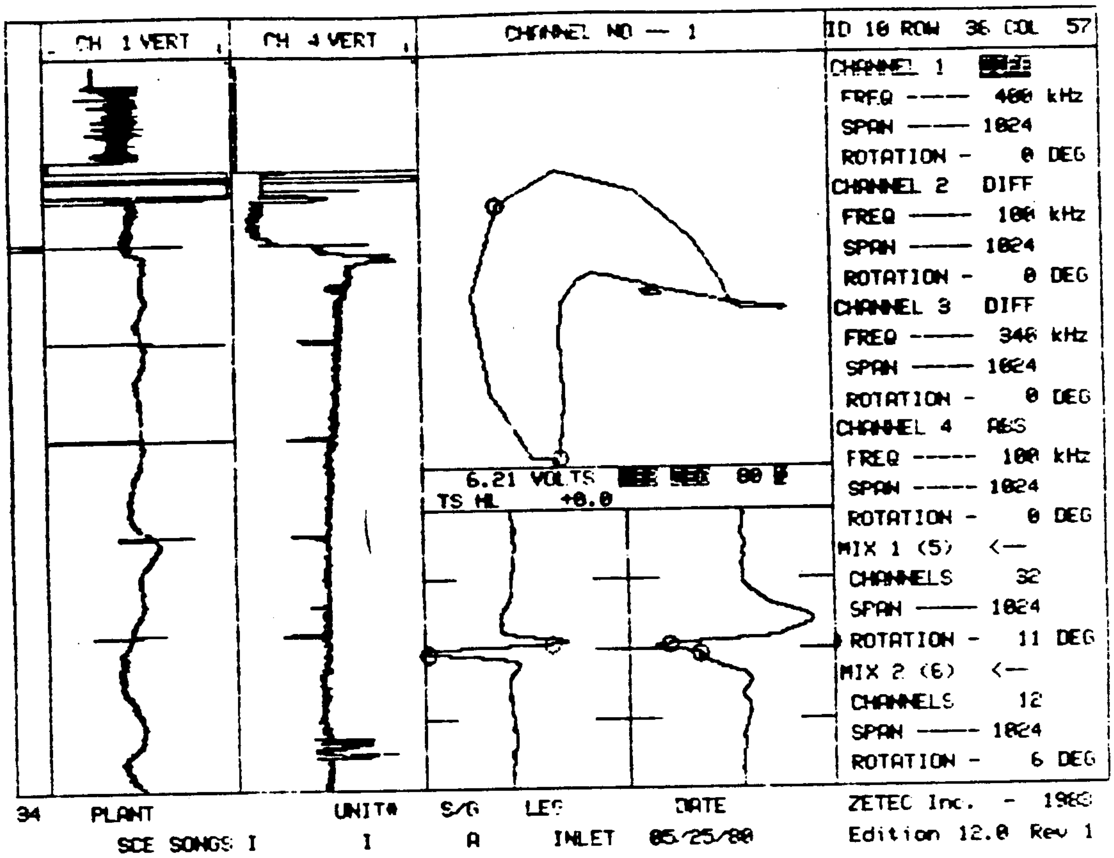
ID 10 ROW 36 COL 57

CHANNEL 1 DIFF
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 12
SPAN ----- 1024
ROTATION - 20 DEG
MIX 2 (6) <--
CHANNELS 34
SPAN ----- 1024
ROTATION - 0 DEG

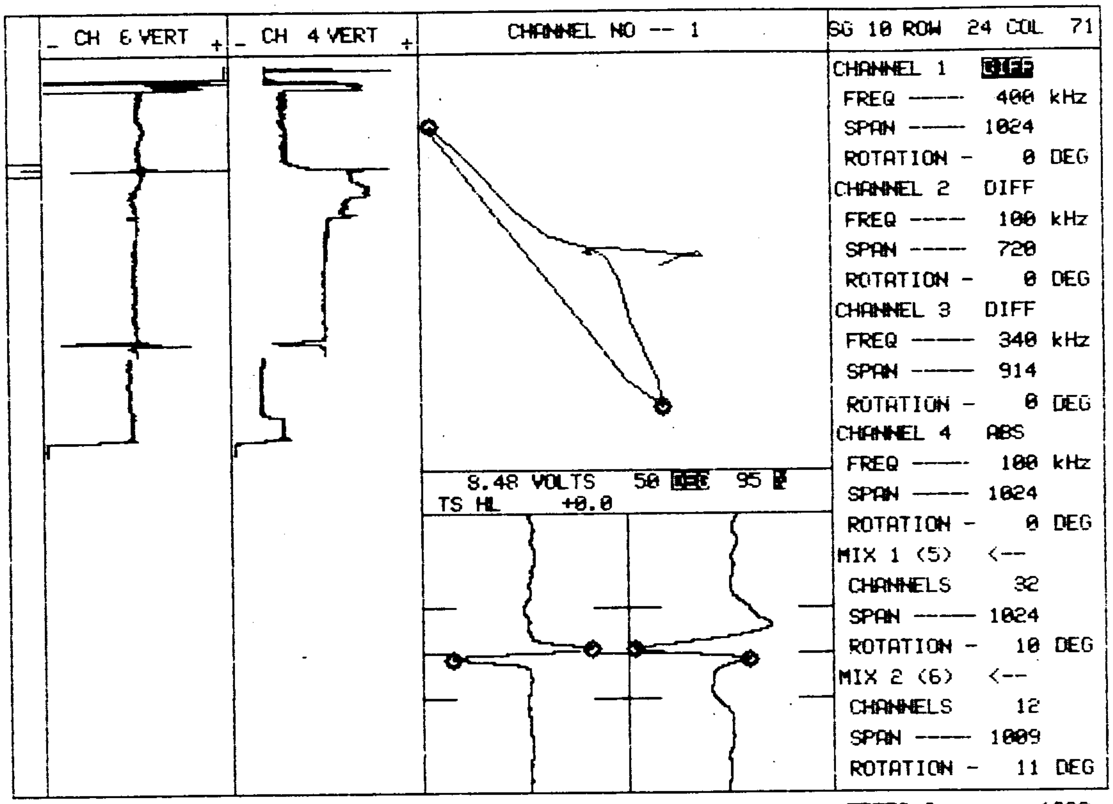
21	PLANT	UNIT#	S/G	LEG	DATE	ZETEC Inc. - 1988
	SCE SONGS	1	A	INLET	05/00/79	Edition 12.0 Rev 1



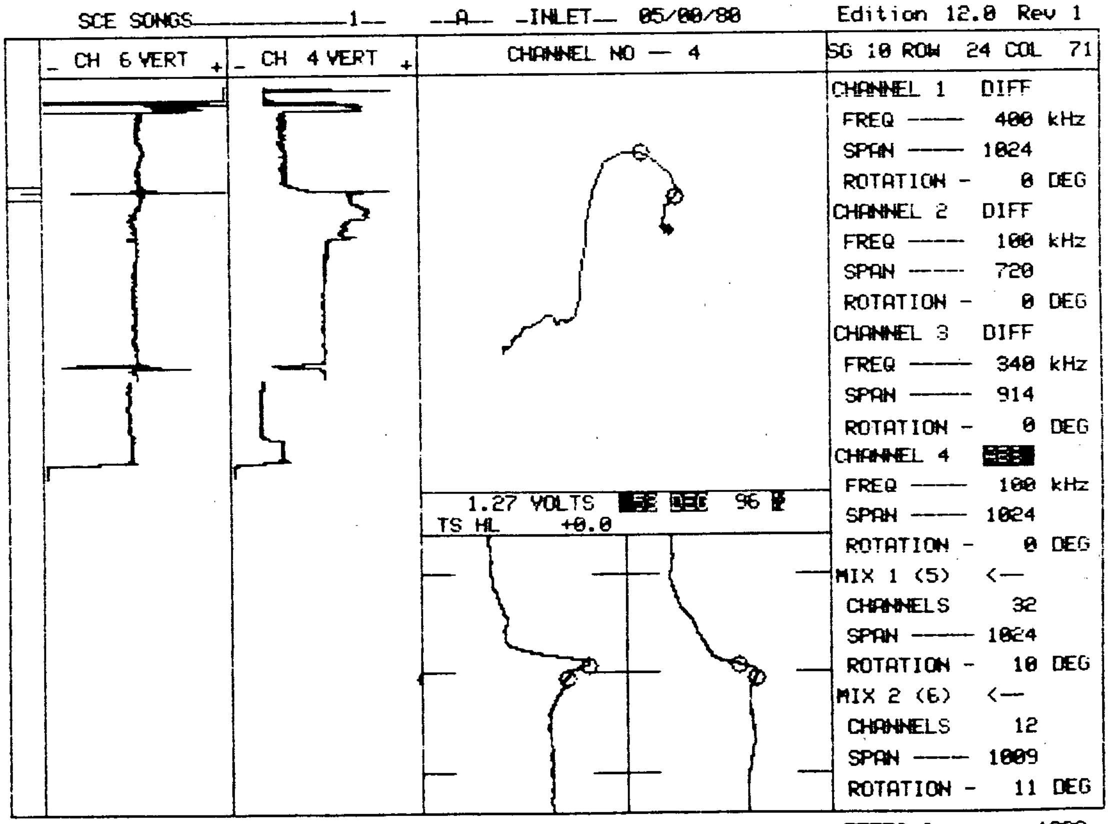
CH 3 VERT
CH 3 HORIZ
CHANNEL NO -- 3
ID 10 ROW 36 COL 57
CHANNEL 1 DIFF
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 12
SPAN ----- 1024
ROTATION - 20 DEG
MIX 2 (6) <--
CHANNELS 34
SPAN ----- 1024
ROTATION - 0 DEG
3.21 VOLTS 113 DEG 62
TS HL +0.0
21 PLANT UNIT# S/G LEG DATE
SCE SONGS 1 A INLET 05/00/7
ZETEC Inc. - 1988
Edition 12.0 Rev 1


CH 1 VERT
CH 4 VERT
CHANNEL NO — 1
ID 10 ROW 36 COL 57
CHANNEL 1
FREQ ——— 400 kHz
SPAN ——— 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ——— 100 kHz
SPAN ——— 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ——— 346 kHz
SPAN ——— 1024
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ——— 100 kHz
SPAN ——— 1024
ROTATION - 0 DEG
MIX 1 (5) <—
CHANNELS 32
SPAN ——— 1024
ROTATION - 11 DEG
MIX 2 (6) <—
CHANNELS 12
SPAN ——— 1024
ROTATION - 6 DEG
6.21 VOLTS
TS HL +0.0
34 PLANT UNIT# S/G LEG DATE
SCE SONGS I I A INLET 05/25/80
ZETEC Inc. - 1983
Edition 12.0 Rev 1

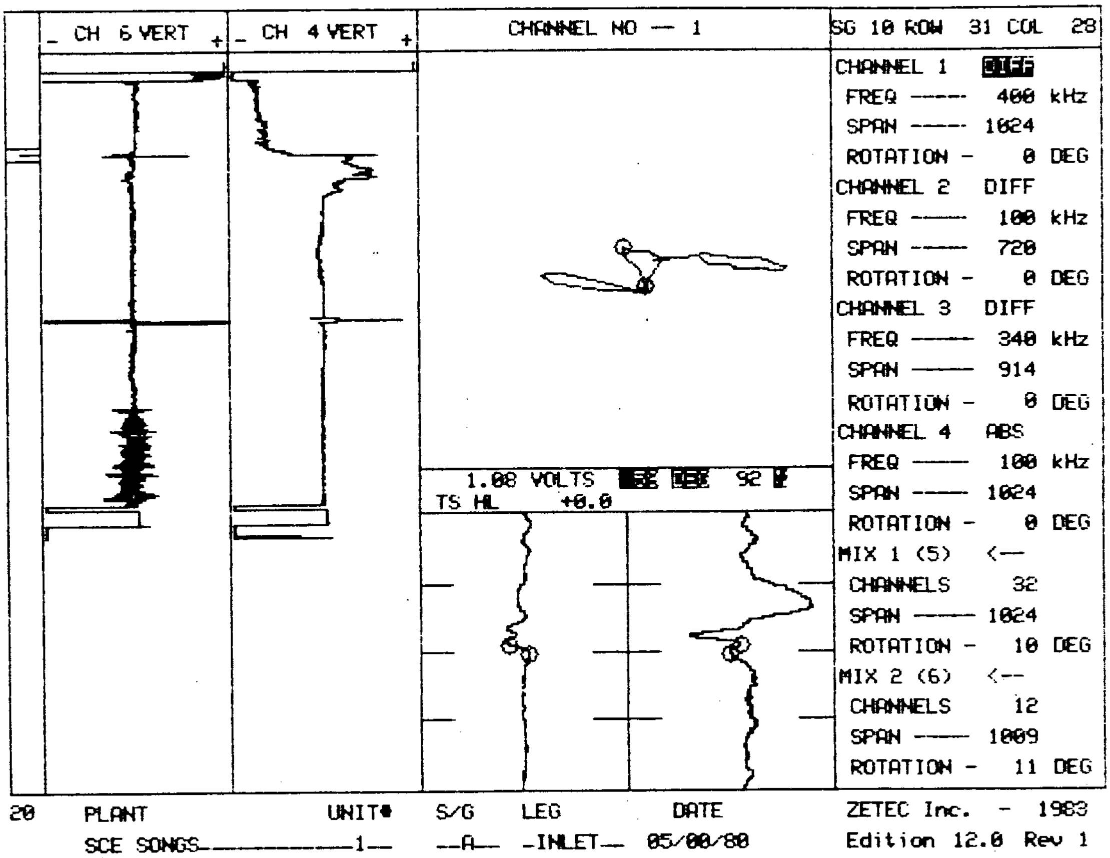
APPENDIX B



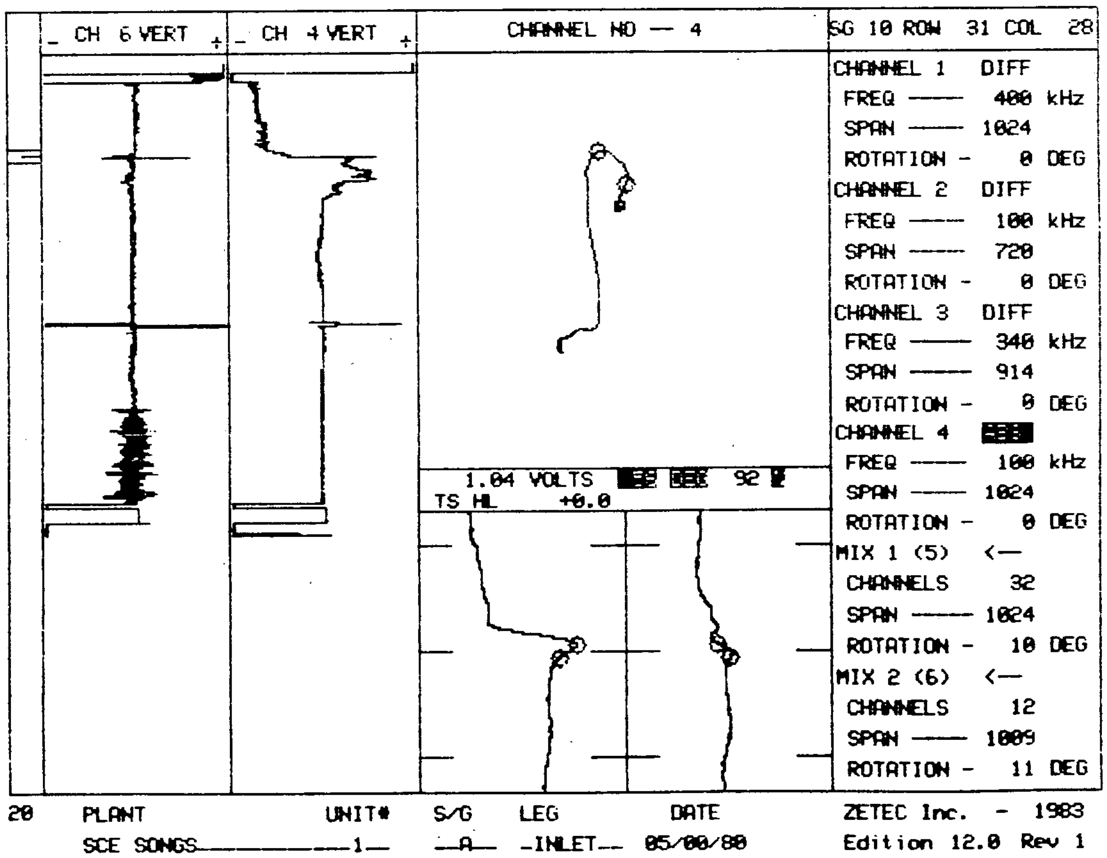
20 PLANT UNIT# S/G LEG DATE ZETEC Inc. - 1983
SCE SONGS——1— —A— -INLET— 05/00/80 Edition 12.0 Rev 1



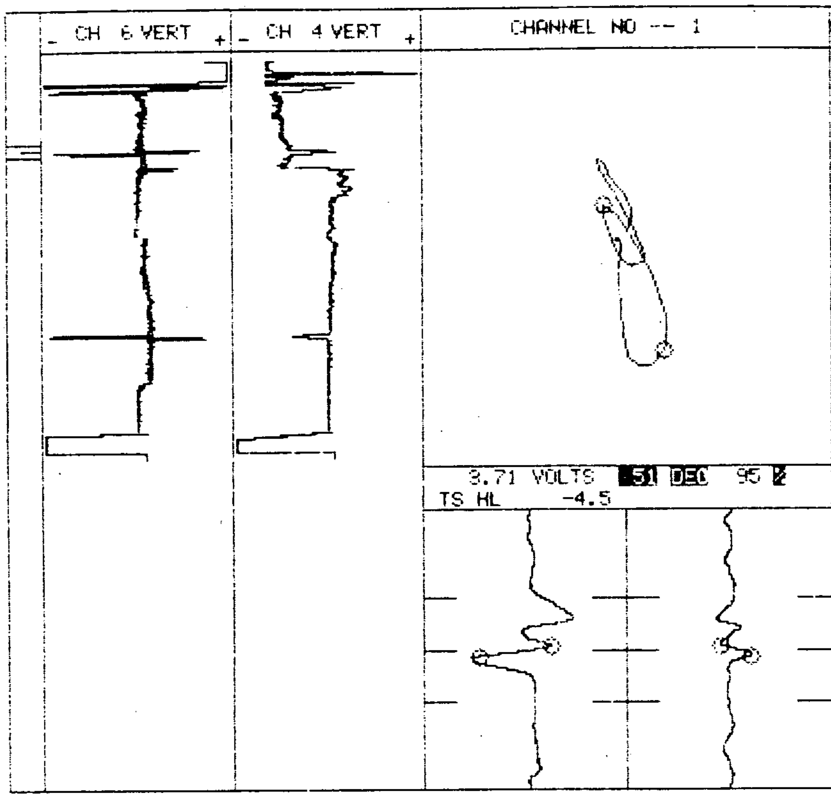
20 PLANT UNIT# S/G LEG DATE ZETEC Inc. - 1983
SCE SONGS——1— —A— -INLET— 05/00/80 Edition 12.0 Rev 1



CH 6 VERT
CH 4 VERT
CHANNEL NO — 1
SG 10 ROW 31 COL 28
CHANNEL 1 DIFF
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 100 kHz
SPAN ----- 720
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 340 kHz
SPAN ----- 914
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <—
CHANNELS 32
SPAN ----- 1024
ROTATION - 10 DEG
MIX 2 (6) <—
CHANNELS 12
SPAN ----- 1009
ROTATION - 11 DEG
1.08 VOLTS
92
TS HL +0.0
20
PLANT UNIT# S/G LEG DATE
SCE SONGS 1 A INLET 05/00/80
ZETEC Inc. - 1983
Edition 12.0 Rev 1



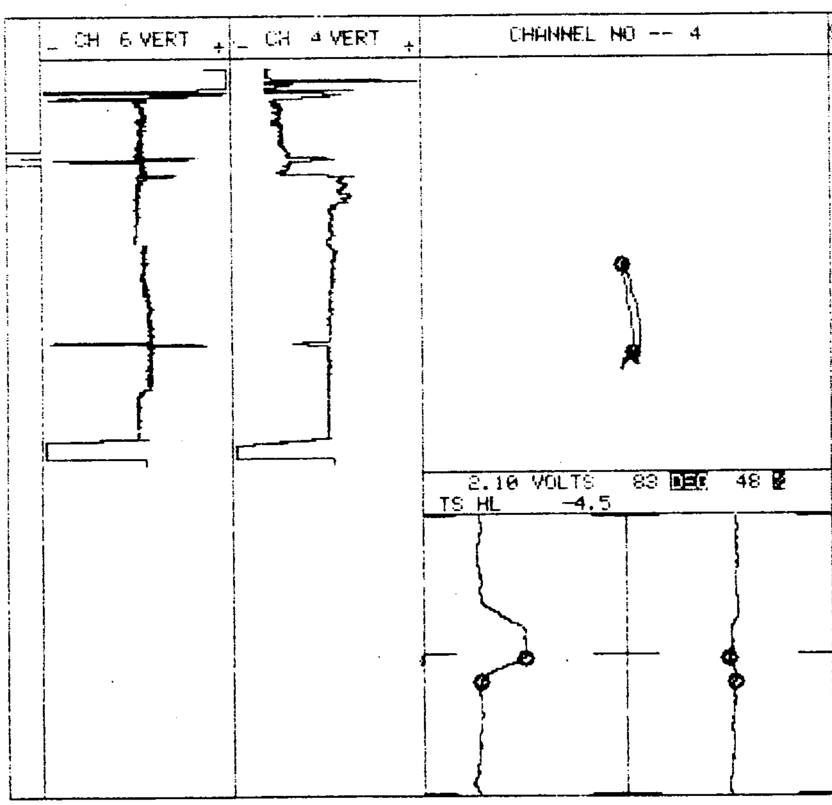
CH 6 VERT
CH 4 VERT
CHANNEL NO — 4
SG 10 ROW 31 COL 28
CHANNEL 1 DIFF
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 100 kHz
SPAN ----- 720
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 340 kHz
SPAN ----- 914
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <—
CHANNELS 32
SPAN ----- 1024
ROTATION - 10 DEG
MIX 2 (6) <—
CHANNELS 12
SPAN ----- 1009
ROTATION - 11 DEG
1.04 VOLTS
92
TS HL +0.0
20
PLANT UNIT# S/G LEG DATE
SCE SONGS 1 A INLET 05/00/80
ZETEC Inc. - 1983
Edition 12.0 Rev 1



SG 10 ROW 17 COL 52

CHANNEL 1 DIFF
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 100 kHz
SPAN ----- 820
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 340 kHz
SPAN ----- 244
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 32
SPAN ----- 1024
ROTATION - 10 DEG
MIX 2 (6) <--
CHANNELS 12
SPAN ----- 1009
ROTATION - 11 DEG

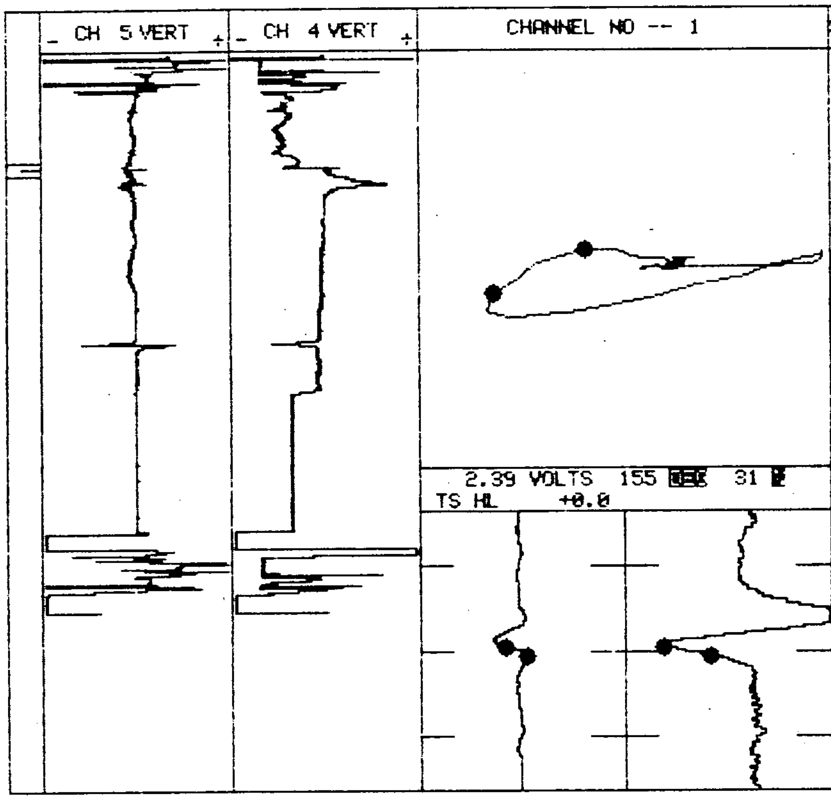
20	PLANT	UNIT#	S/G	LEG	DATE	ZETEC Inc. - 1983
	SCE SONGS	1	A	INLET	05/00/80	Edition 12.0 Rev 1



SG 10 ROW 17 COL 52

CHANNEL 1 DIFF
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 100 kHz
SPAN ----- 820
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 340 kHz
SPAN ----- 244
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 32
SPAN ----- 1024
ROTATION - 10 DEG
MIX 2 (6) <--
CHANNELS 12
SPAN ----- 1009
ROTATION - 11 DEG

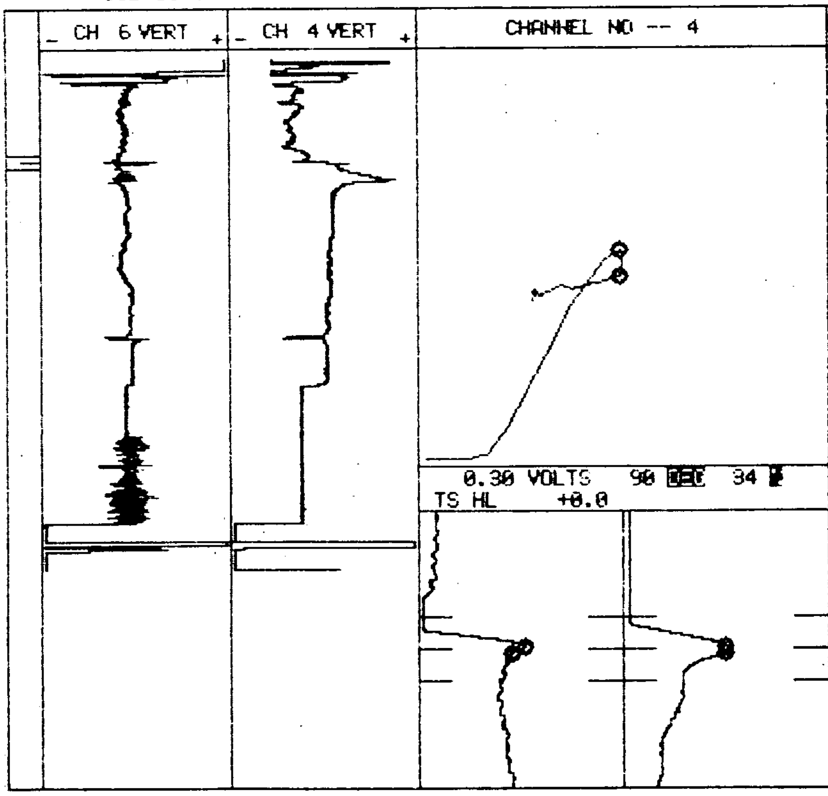
20	PLANT	UNIT#	S/G	LEG	DATE	ZETEC Inc. - 1983
	SCE SONGS	1	A	INLET	05/00/80	Edition 12.0 Rev 1



SG 10 ROW 12 COL 70

CHANNEL 1 DIFF
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 340 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 32
SPAN ----- 1024
ROTATION - 10 DEG
MIX 2 (6) <--
CHANNELS 12
SPAN ----- 1024
ROTATION - 4 DEG

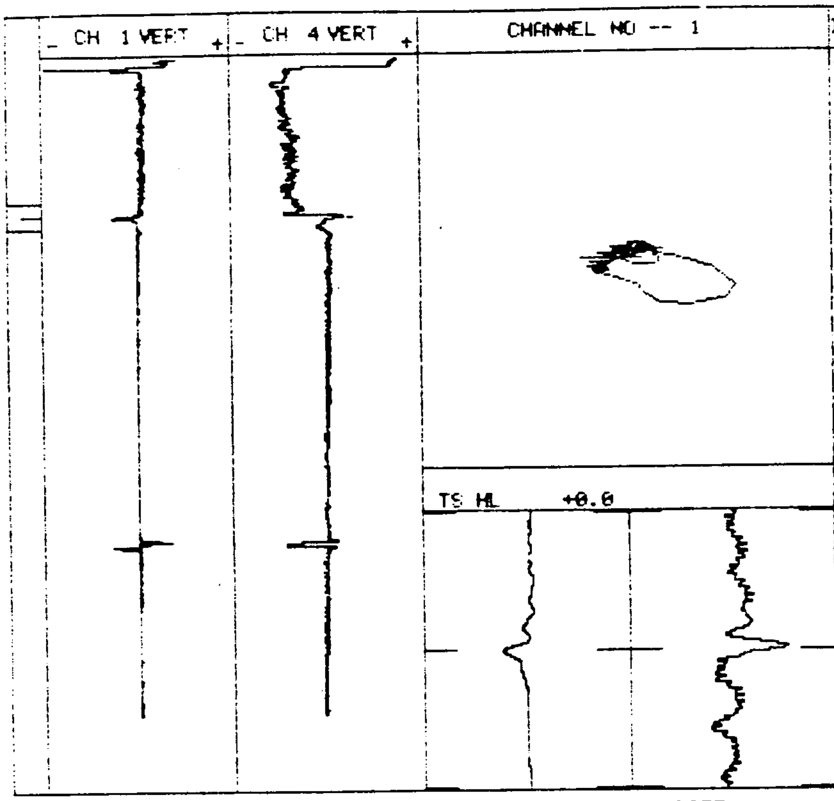
20 PLANT UNIT# S/G LEG DATE ZETEC Inc. - 1983
SCE SONGS I I A INLET 05/25/80 Edition 12.0 Rev 1



SG 10 ROW 12 COL 70

CHANNEL 1 DIFF
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 100 kHz
SPAN ----- 820
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 340 kHz
SPAN ----- 244
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 484
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 32
SPAN ----- 1024
ROTATION - 10 DEG
MIX 2 (6) <--
CHANNELS 12
SPAN ----- 1009
ROTATION - 11 DEG

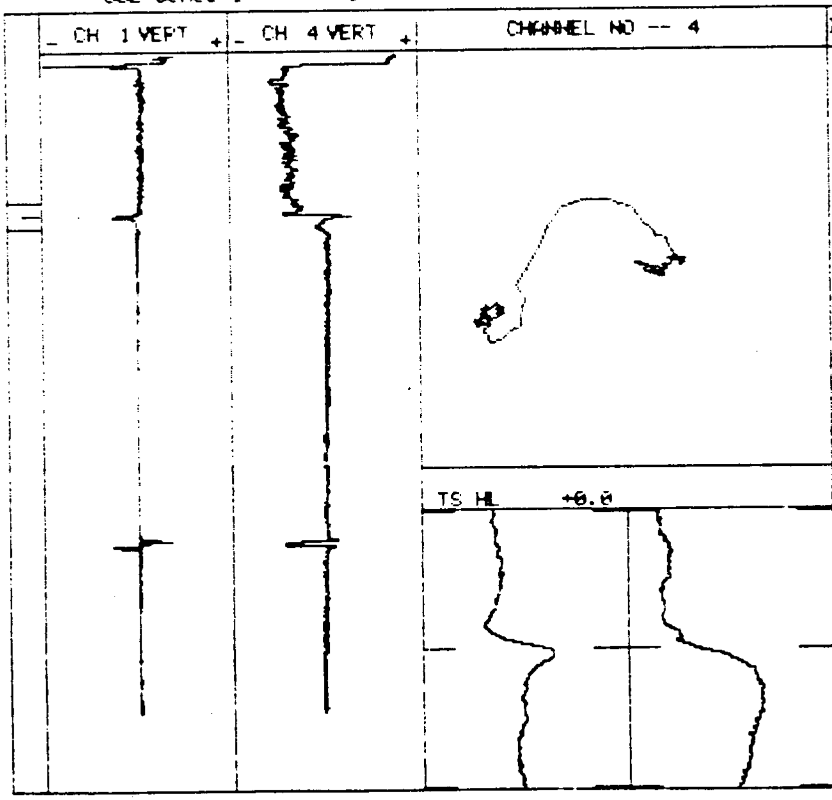
20 PLANT UNIT# S/G LEG DATE ZETEC Inc. - 1983
SCE SONGS 1 A INLET 05/00/80 Edition 12.0 Rev 1



ID 10 ROW 41 COL 46

CHANNEL 1 DIFF
FREQ ----- 400 kHz
SPAN ----- 1314
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 340 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 32
SPAN ----- 1024
ROTATION - 11 DEG
MIX 2 (6) <--
CHANNELS 12
SPAN ----- 1024
ROTATION - 6 DEG

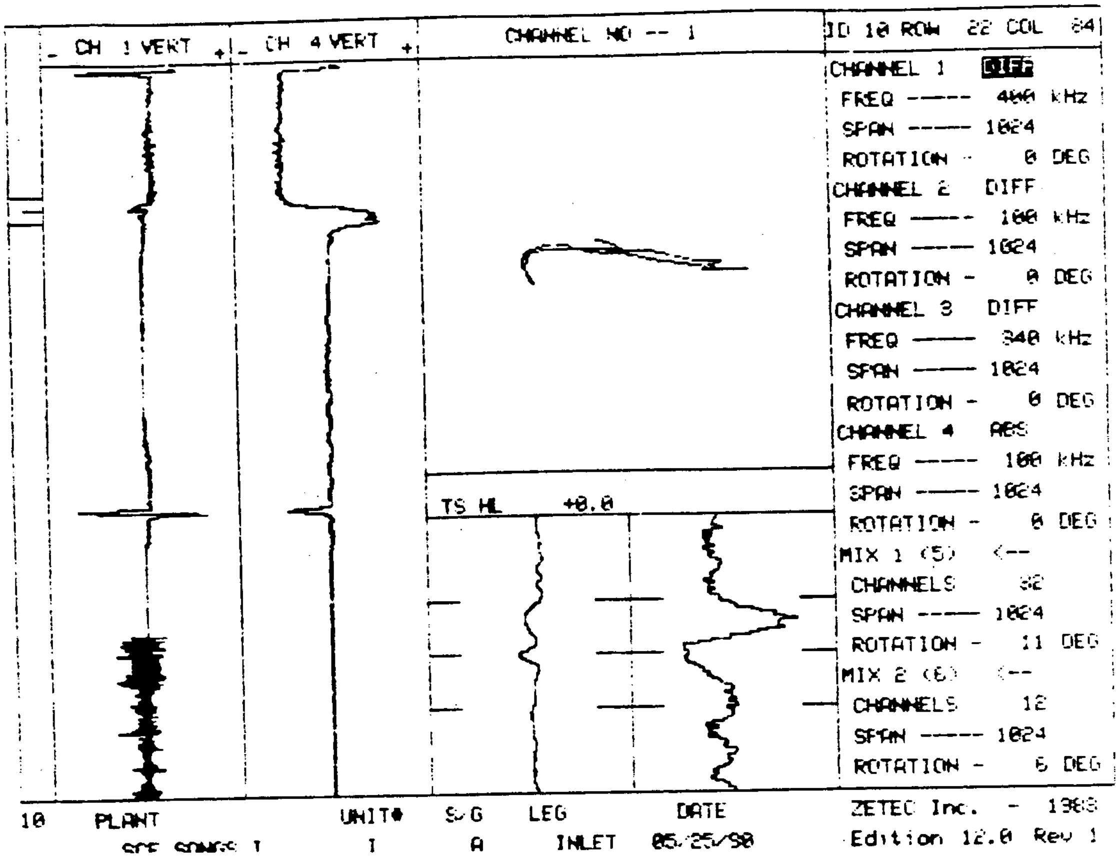
10	PLANT	UNIT#	S/G	LEG	DATE	ZETEC Inc. - 1983
	SCE SONGS I	I	A	OUTLET	05/25/90	Edition 12.0 Rev 1



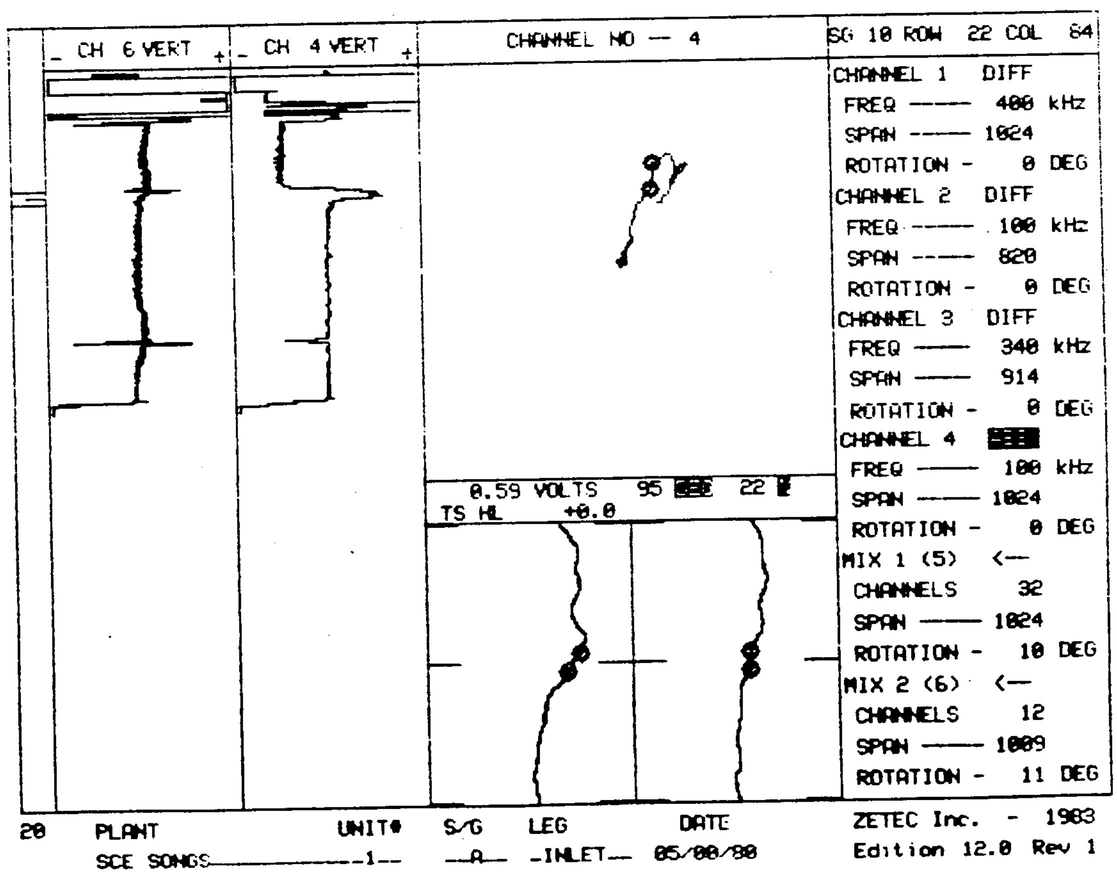
ID 10 ROW 41 COL 46

CHANNEL 1 DIFF
FREQ ----- 400 kHz
SPAN ----- 1314
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 340 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 32
SPAN ----- 1024
ROTATION - 11 DEG
MIX 2 (6) <--
CHANNELS 12
SPAN ----- 1024
ROTATION - 6 DEG

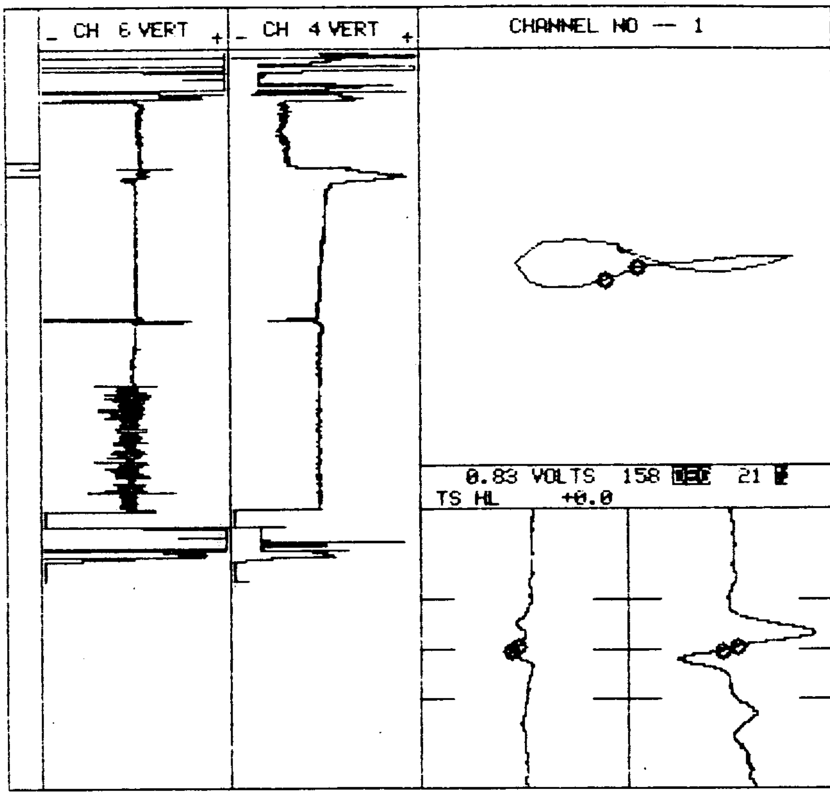
10	PLANT	UNIT#	S/G	LEG	DATE	ZETEC Inc. - 1983
	SCE SONGS I	I	A	OUTLET	05/25/90	Edition 12.0 Rev 1



CH 1 VERT
CH 4 VERT
CHANNEL NO -- 1
ID 10 ROW 22 COL 84
CHANNEL 1 DIFF
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 340 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 32
SPAN ----- 1024
ROTATION - 11 DEG
MIX 2 (6) <--
CHANNELS 12
SPAN ----- 1024
ROTATION - 6 DEG
TS HL +0.0
10 PLANT UNIT# S/G LEG DATE
I A INLET 05/25/98
ZETEC Inc. - 1983
Edition 12.0 Rev 1



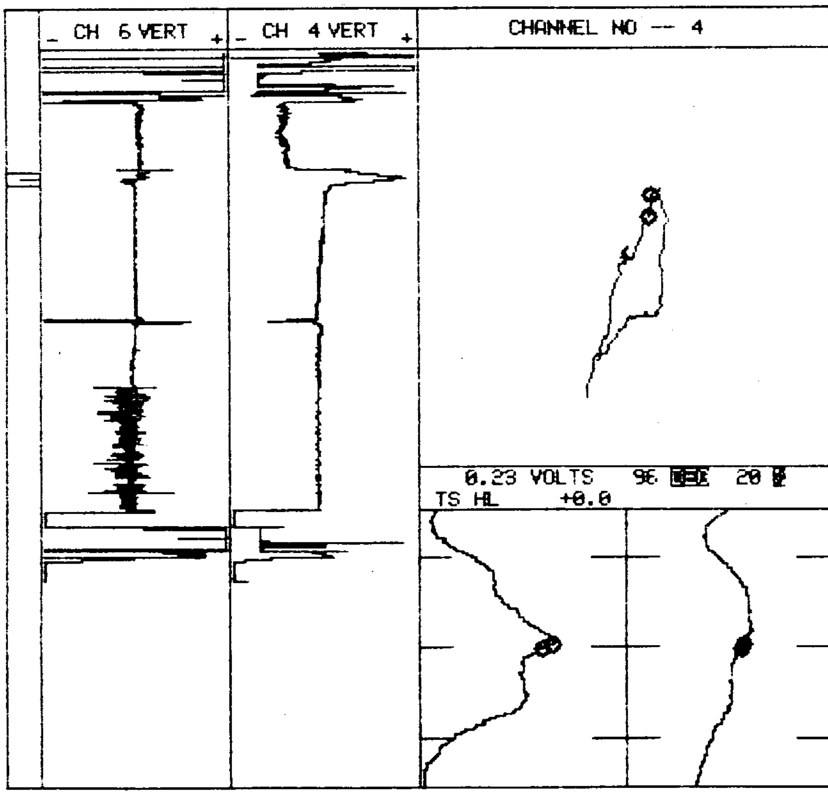
CH 6 VERT
CH 4 VERT
CHANNEL NO -- 4
SG 10 ROW 22 COL 84
CHANNEL 1 DIFF
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 100 kHz
SPAN ----- 820
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 340 kHz
SPAN ----- 914
ROTATION - 0 DEG
CHANNEL 4
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 32
SPAN ----- 1024
ROTATION - 10 DEG
MIX 2 (6) <--
CHANNELS 12
SPAN ----- 1009
ROTATION - 11 DEG
0.59 VOLTS 95 22
TS HL +0.0
20 PLANT UNIT# S/G LEG DATE
SCE SONGS 1 A INLET 05/08/98
ZETEC Inc. - 1983
Edition 12.0 Rev 1



SG 10 ROW 23 COL 83

CHANNEL 1 DIFF
FREQ ------ 400 kHz
SPAN ------ 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ------ 100 kHz
SPAN ------ 820
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ------ 340 kHz
SPAN ------ 244
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ------ 100 kHz
SPAN ------ 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 32
SPAN ------ 1024
ROTATION - 10 DEG
MIX 2 (6) <--
CHANNELS 12
SPAN ------ 1009
ROTATION - 11 DEG

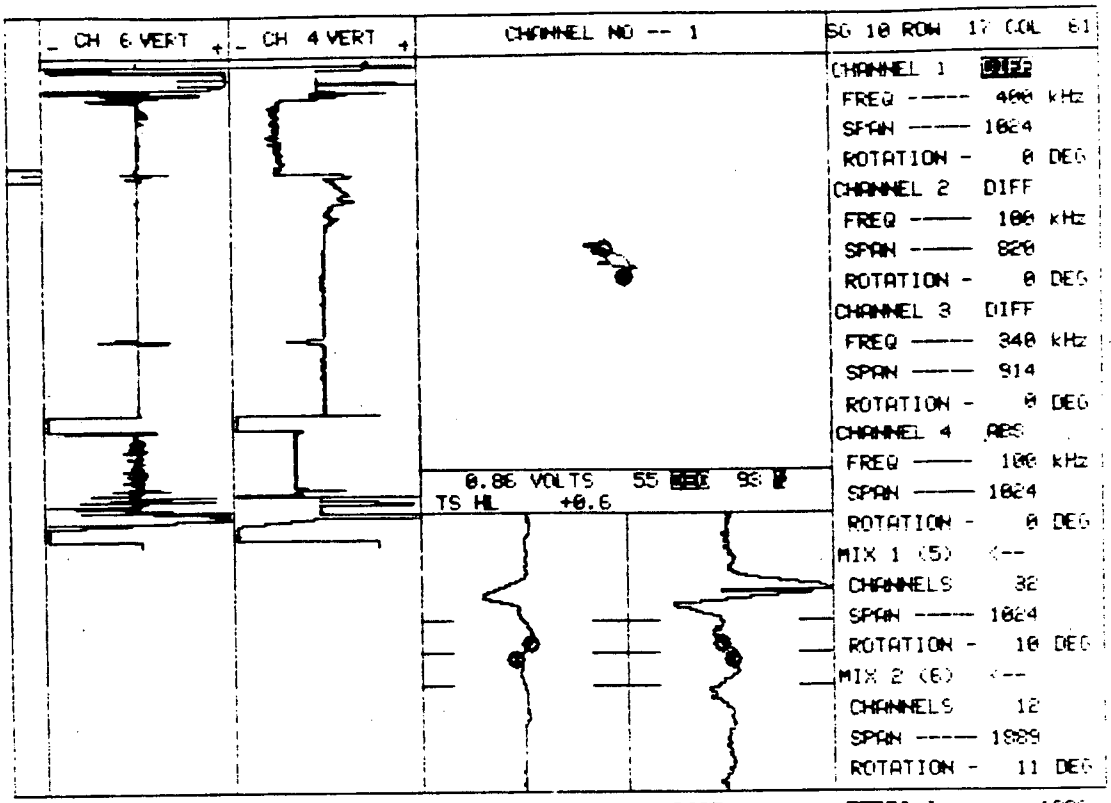
20	PLANT	UNIT#	S/G	LEG	DATE	ZETEC Inc. - 1983
	SCE SONGS	1	A	INLET	05/00/80	Edition 12.0 Rev 1



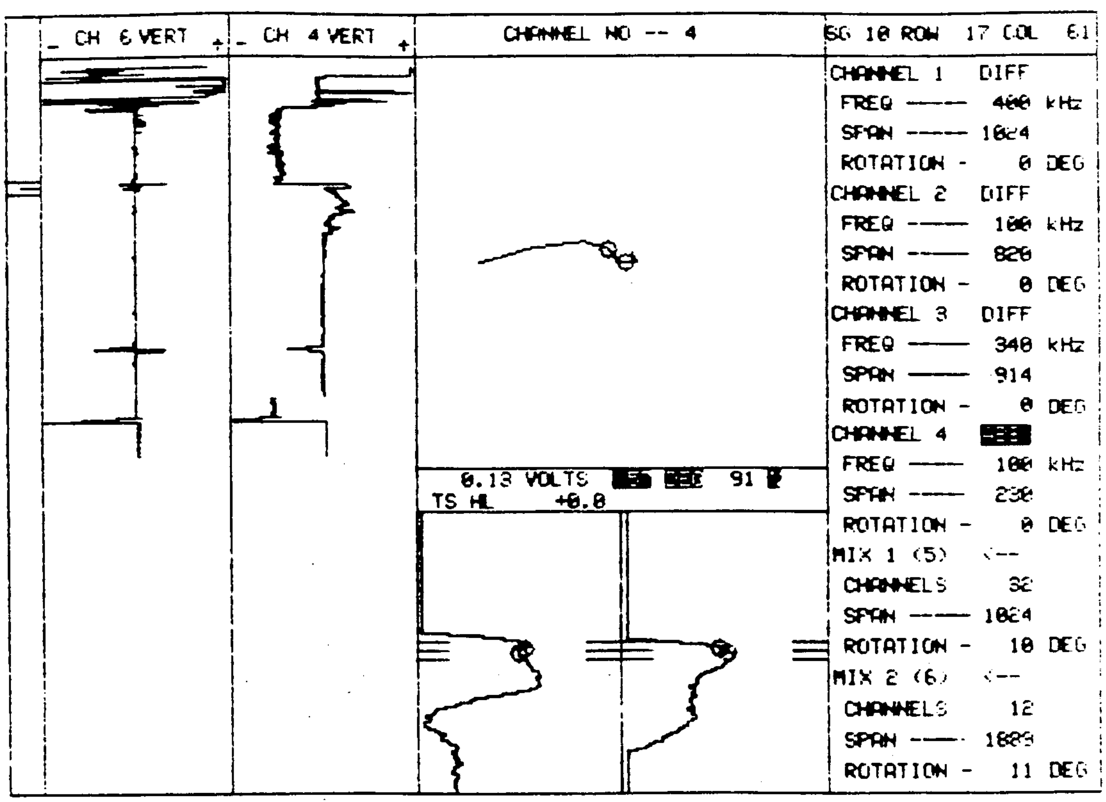
SG 10 ROW 23 COL 83

CHANNEL 1 DIFF
FREQ ------ 400 kHz
SPAN ------ 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ------ 100 kHz
SPAN ------ 820
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ------ 340 kHz
SPAN ------ 244
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ------ 100 kHz
SPAN ------ 484
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 32
SPAN ------ 1024
ROTATION - 10 DEG
MIX 2 (6) <--
CHANNELS 12
SPAN ------ 1009
ROTATION - 11 DEG

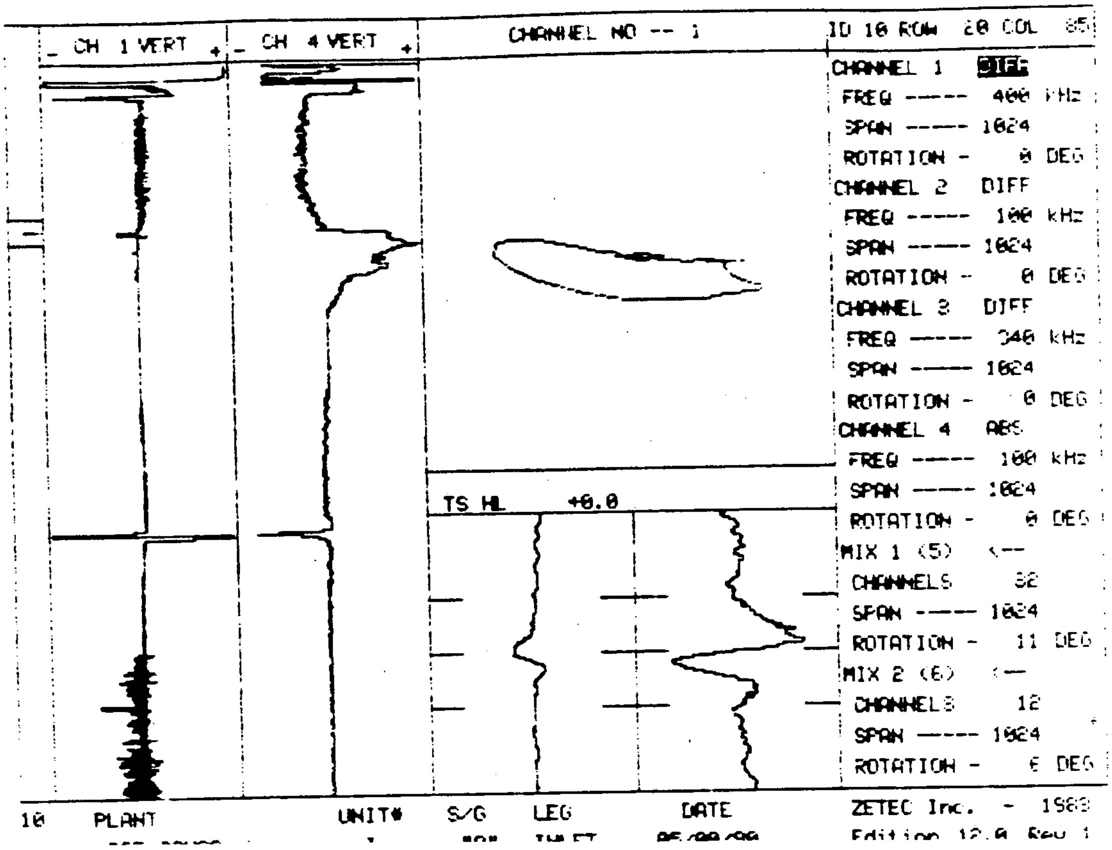
20	PLANT	UNIT#	S/G	LEG	DATE	ZETEC Inc. - 1983
	SCE SONGS	1	A	INLET	05/00/80	Edition 12.0 Rev 1

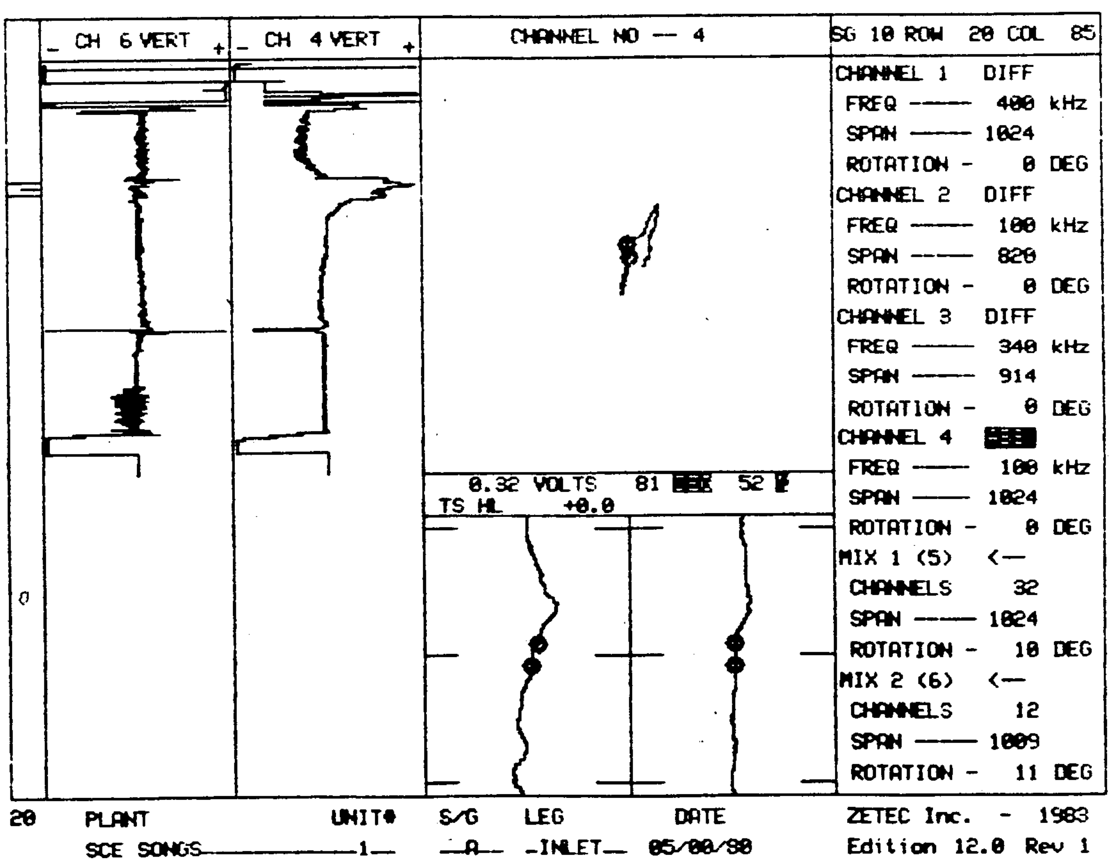


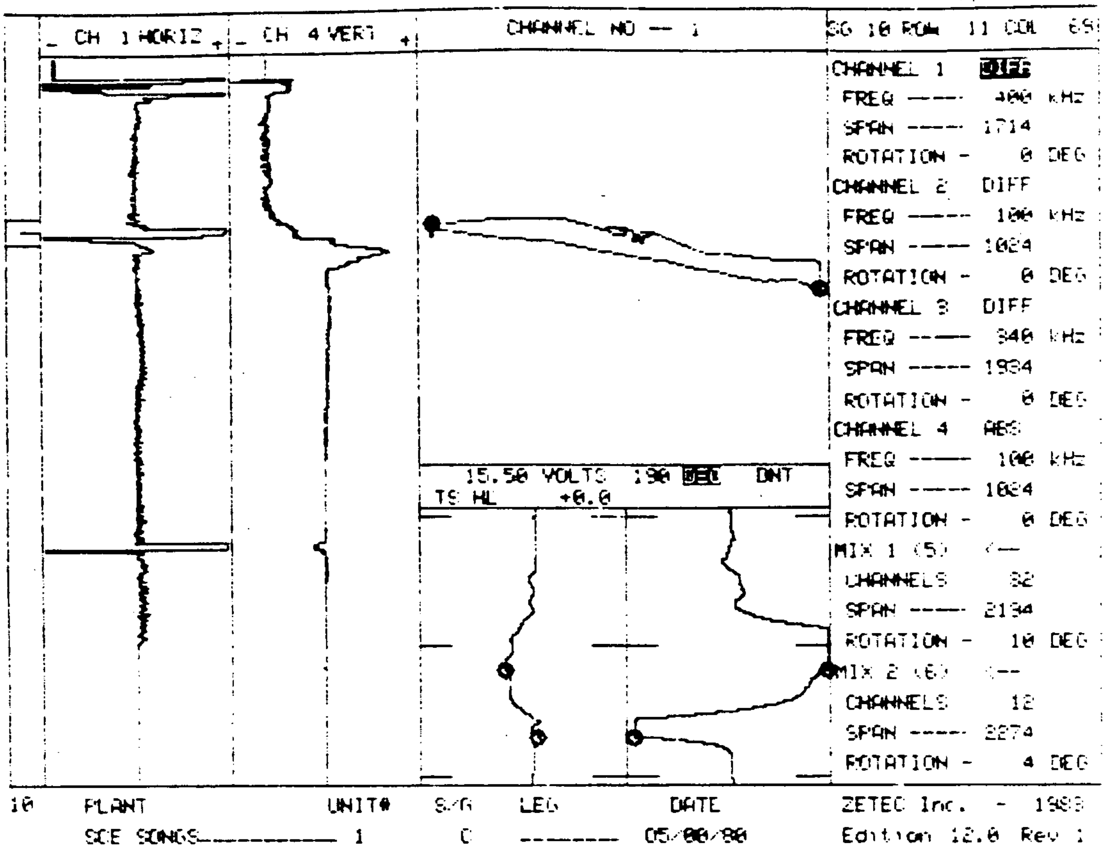
20 PLANT UNIT# S/G LEG DATE ZETEC Inc. - 1983
SCE SONGS----1-- --A-- -INLET-- 05/00/98 Edition 12.0 Rev 1

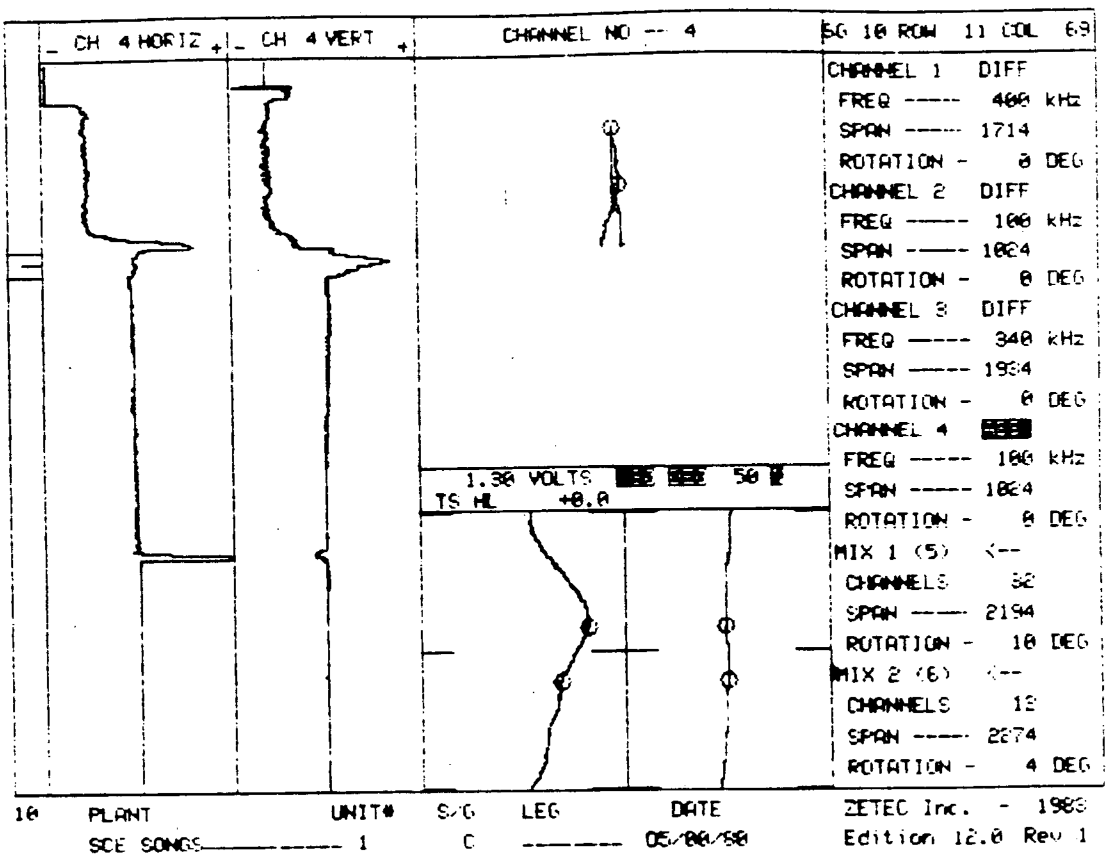


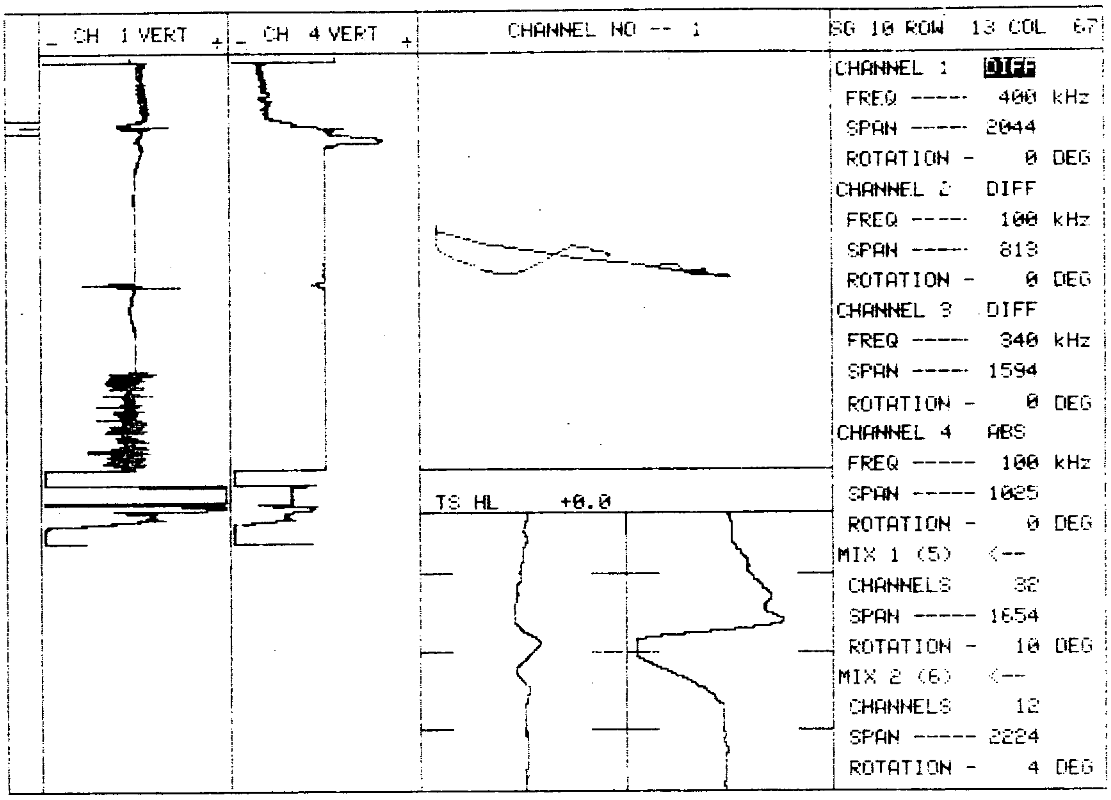
20 PLANT UNIT# S/G LEG DATE ZETEC Inc. - 1983
SCE SONGS----1-- --A-- -INLET-- 05/00/98 Edition 12.0 Rev 1


CH 1 VERT
CH 4 VERT
CHANNEL NO -- 1
ID 10 ROW 20 COL 85
CHANNEL 1 DIFF
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 340 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 32
SPAN ----- 1024
ROTATION - 11 DEG
MIX 2 (6) <--
CHANNELS 12
SPAN ----- 1024
ROTATION - 6 DEG
TS HL +0.0
10 PLANT UNIT# S/G LEG DATE
ZETEC Inc. - 1983

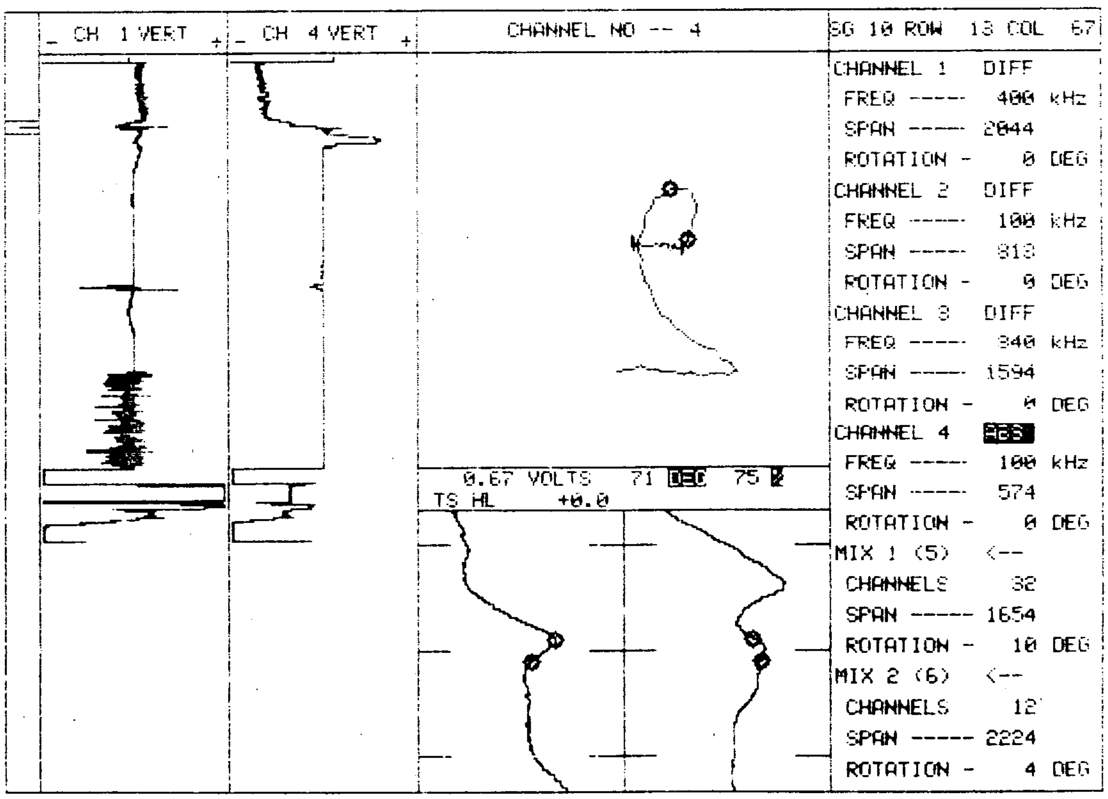

CH 6 VERT
CH 4 VERT
CHANNEL NO — 4
SG 10 ROW 20 COL 85
CHANNEL 1 DIFF
FREQ ——— 400 kHz
SPAN ——— 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ——— 100 kHz
SPAN ——— 820
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ——— 340 kHz
SPAN ——— 914
ROTATION - 0 DEG
CHANNEL 4
FREQ ——— 100 kHz
SPAN ——— 1024
ROTATION - 0 DEG
MIX 1 (5) <—
CHANNELS 32
SPAN ——— 1024
ROTATION - 10 DEG
MIX 2 (6) <—
CHANNELS 12
SPAN ——— 1009
ROTATION - 11 DEG
0.32 VOLTS 81 52
TS HL +0.0
0
20 PLANT UNIT# S/G LEG DATE
SCE SONGS 1 A INLET 05/00/88
ZETEC Inc. - 1983
Edition 12.0 Rev 1


CH 1 HORIZ
CH 4 VERT
CHANNEL NO -- 1
SG 10 ROW 11 COL 69
CHANNEL 1 DIFF
FREQ ----- 400 kHz
SPAN ----- 1714
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 340 kHz
SPAN ----- 1934
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 32
SPAN ----- 2194
ROTATION - 10 DEG
MIX 2 (6) <--
CHANNELS 12
SPAN ----- 2274
ROTATION - 4 DEG
15.50 VOLTS 190 DEG DNT
TS HL +0.0
10 PLANT UNIT# S/G LEG DATE
SCE SONGS 1 C 05/00/00
ZETEC Inc. - 1983
Edition 12.0 Rev 1

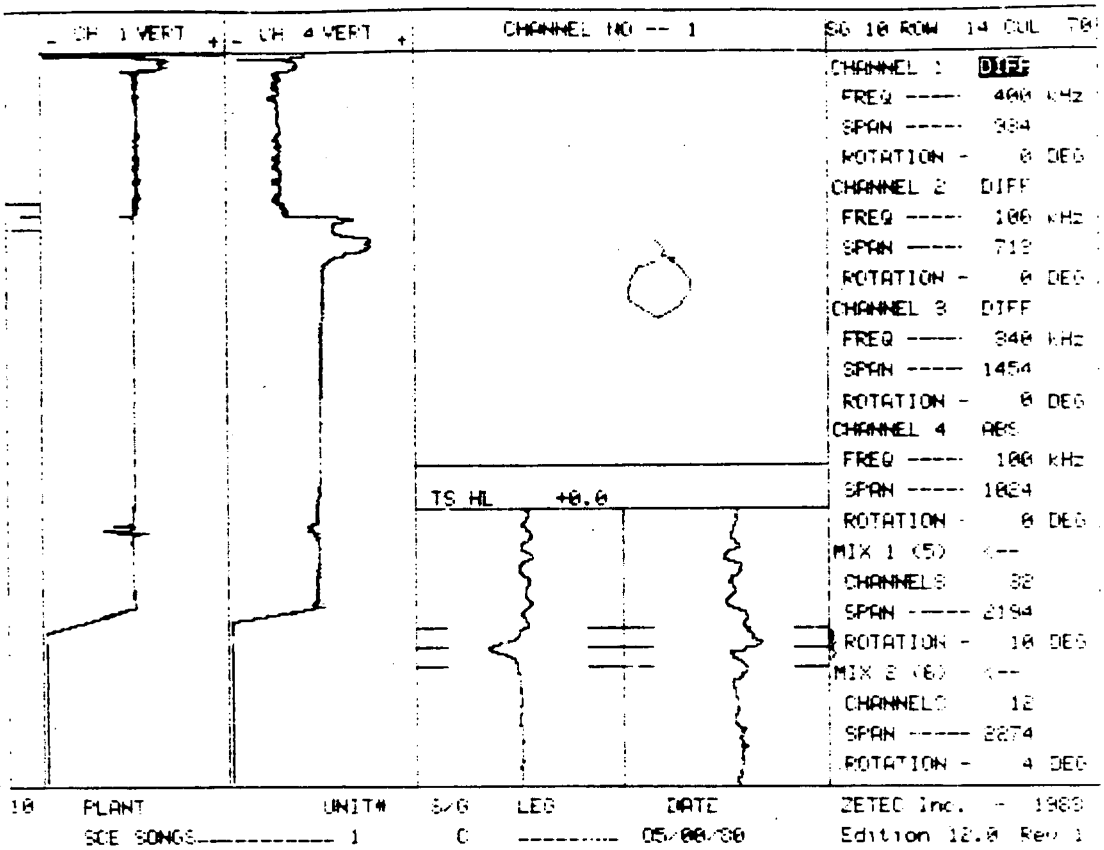

CH 4 HORIZ
CH 4 VERT
CHANNEL NO -- 4
SG 10 ROW 11 COL 69
CHANNEL 1 DIFF
FREQ ----- 400 kHz
SPAN ----- 1714
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 340 kHz
SPAN ----- 1934
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 32
SPAN ----- 2194
ROTATION - 10 DEG
MIX 2 (6) <--
CHANNELS 12
SPAN ----- 2274
ROTATION - 4 DEG
1.30 VOLTS 50
TS HL +0.0
10 PLANT UNIT# S/G LEG DATE
SCE SONGS 1 C 05/00/00
ZETEC Inc. - 1983
Edition 12.0 Rev 1

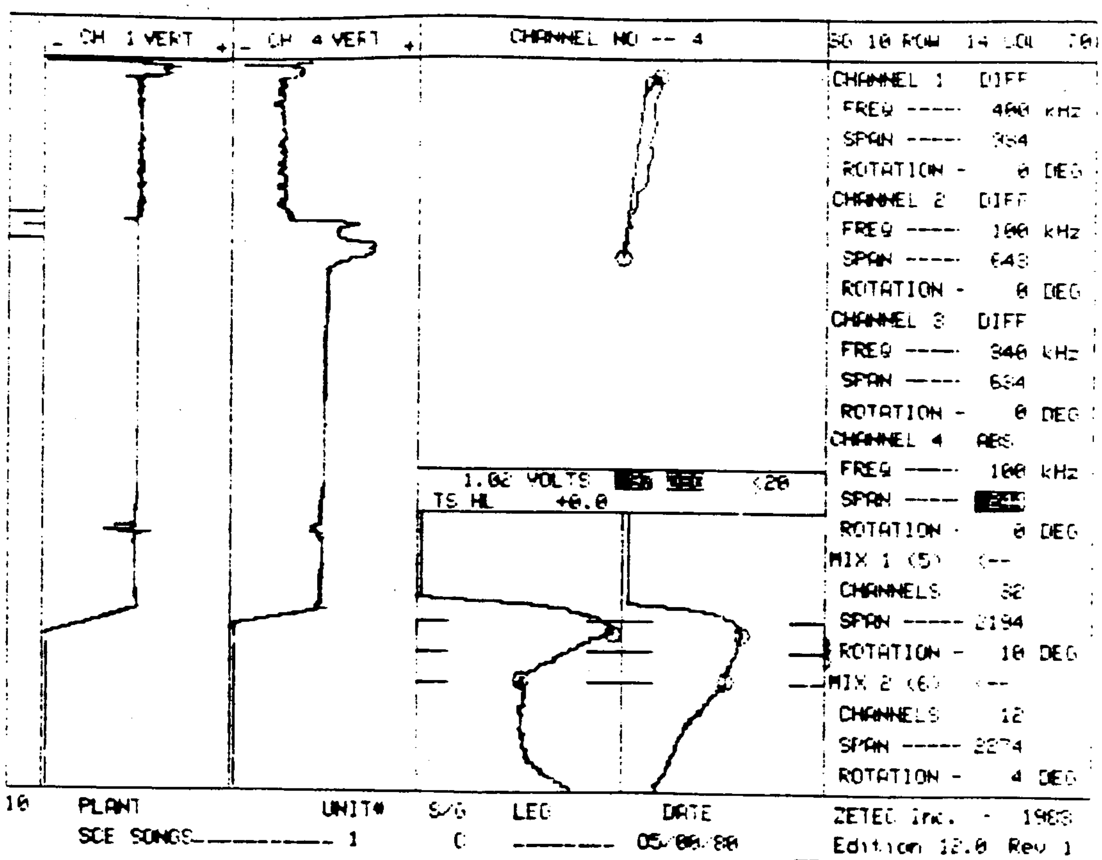


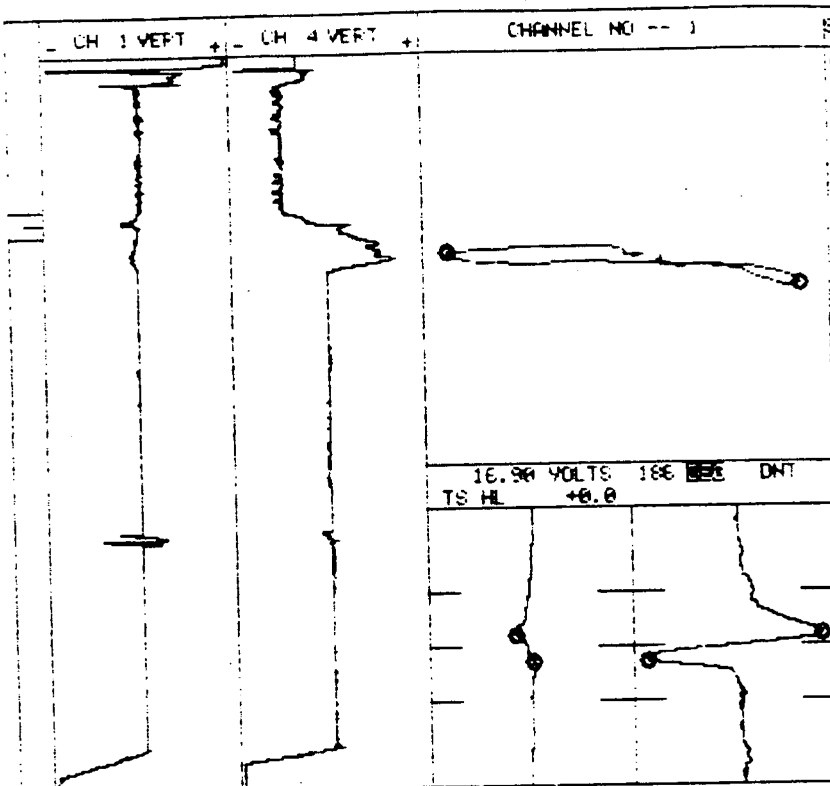
20	PLANT	UNIT#	S/G	LEG	DATE	ZETEC Inc. - 1983
	SCE SONGS____________	1	C	--------	05/00/80	Edition 12.0 Rev 1



20	PLANT	UNIT#	S/G	LEG	DATE	ZETEC Inc. - 1983
	SCE SONGS____________	1	C	--------	05/00/80	Edition 12.0 Rev 1


- CH 1 VERT +
- CH 4 VERT +
CHANNEL NO -- 1
SG 10 ROW 14 COL
CHANNEL 1 DIFF
FREQ ---- 400 kHz
SPAN ---- 384
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ---- 100 kHz
SPAN ---- 712
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ---- 340 kHz
SPAN ---- 1454
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ---- 100 kHz
SPAN ---- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 32
SPAN ----- 2194
ROTATION - 10 DEG
MIX 2 (6) <--
CHANNELS 12
SPAN ----- 2274
ROTATION - 4 DEG
TS HL +0.0
10 PLANT UNIT# S/G LEG DATE
SCE SONGS 1 C 05/08/88
ZETEC Inc. - 1988
Edition 12.0 Rev 1

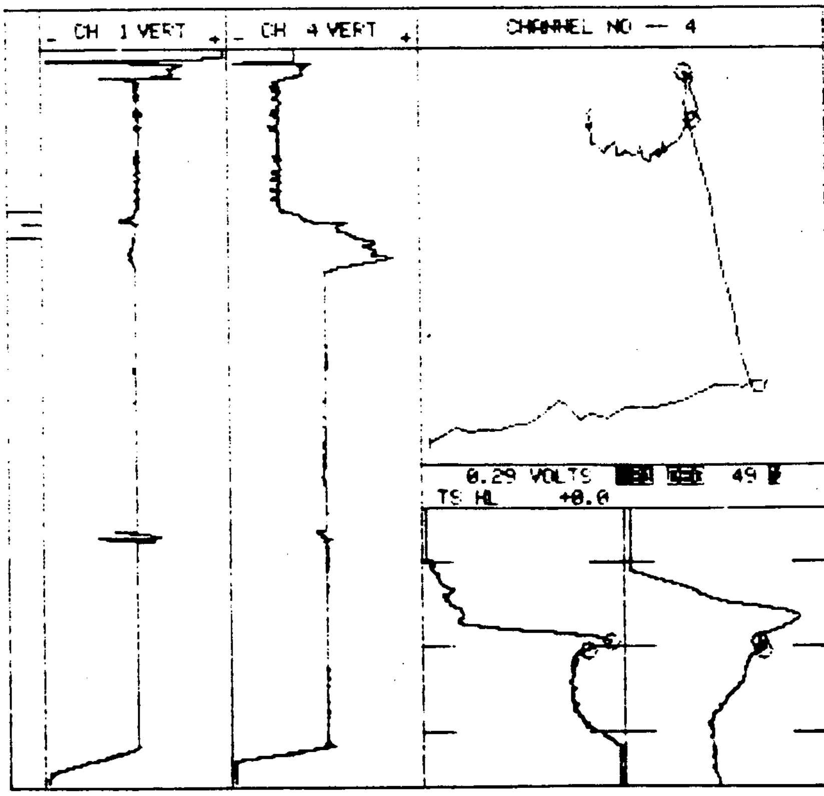

- CH 1 VERT +
- CH 4 VERT +
CHANNEL NO -- 4
SG 10 ROW 14 COL
CHANNEL 1 DIFF
FREQ ---- 400 kHz
SPAN ---- 384
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ---- 100 kHz
SPAN ---- 643
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ---- 340 kHz
SPAN ---- 634
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ---- 100 kHz
SPAN ----
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 32
SPAN ----- 2194
ROTATION - 10 DEG
MIX 2 (6) <--
CHANNELS 12
SPAN ----- 2274
ROTATION - 4 DEG
1.02 VOLTS <20
TS HL +0.0
10 PLANT UNIT# S/G LEG DATE
SCE SONGS 1 C 05/08/88
ZETEC Inc. - 1988
Edition 12.0 Rev 1



SG 10 ROW 32 COL 71

CHANNEL 1 DIFF
FREQ ----- 400 kHz
SPAN ----- 2064
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 100 kHz
SPAN ----- 554
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 340 kHz
SPAN ----- 784
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 32
SPAN ----- 2194
ROTATION - 10 DEG
MIX 2 (6) <--
CHANNELS 12
SPAN ----- 2274
ROTATION - 4 DEG

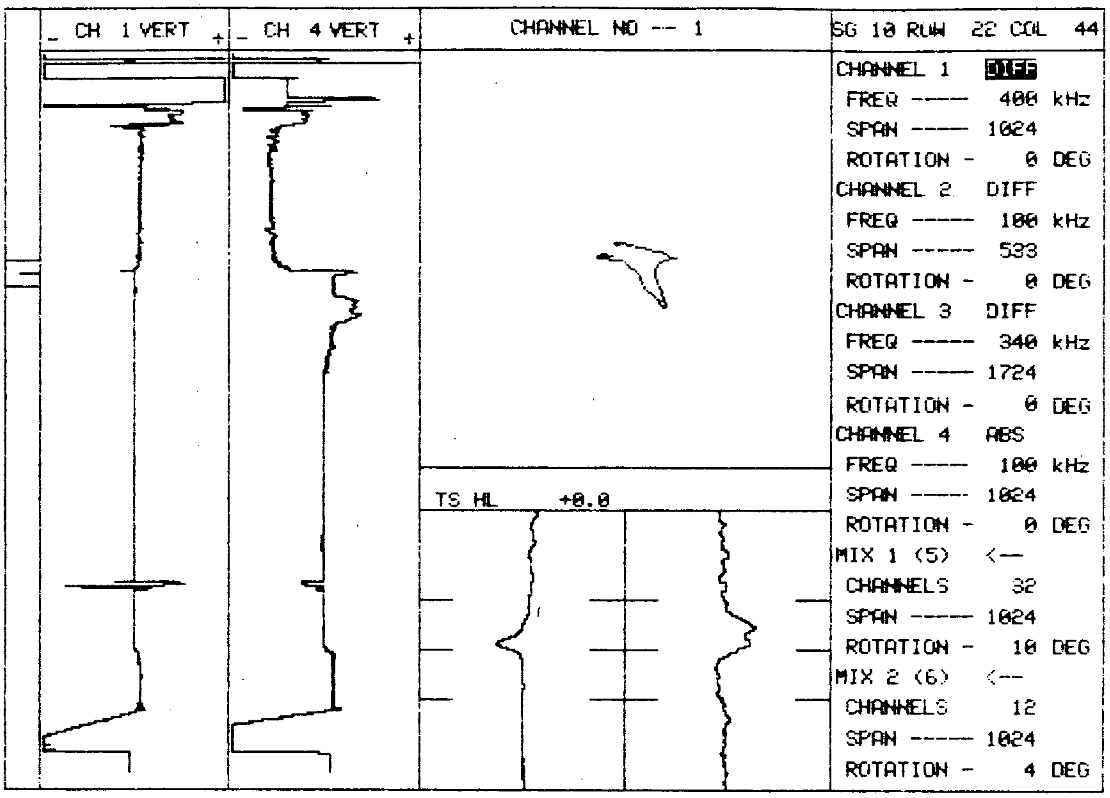
10	PLANT	UNIT#	S/G	LEG	DATE	ZETEC Inc. - 1983
	SCE SONGS	1	C	-------	05/00/88	Edition 12.0 Rev 1



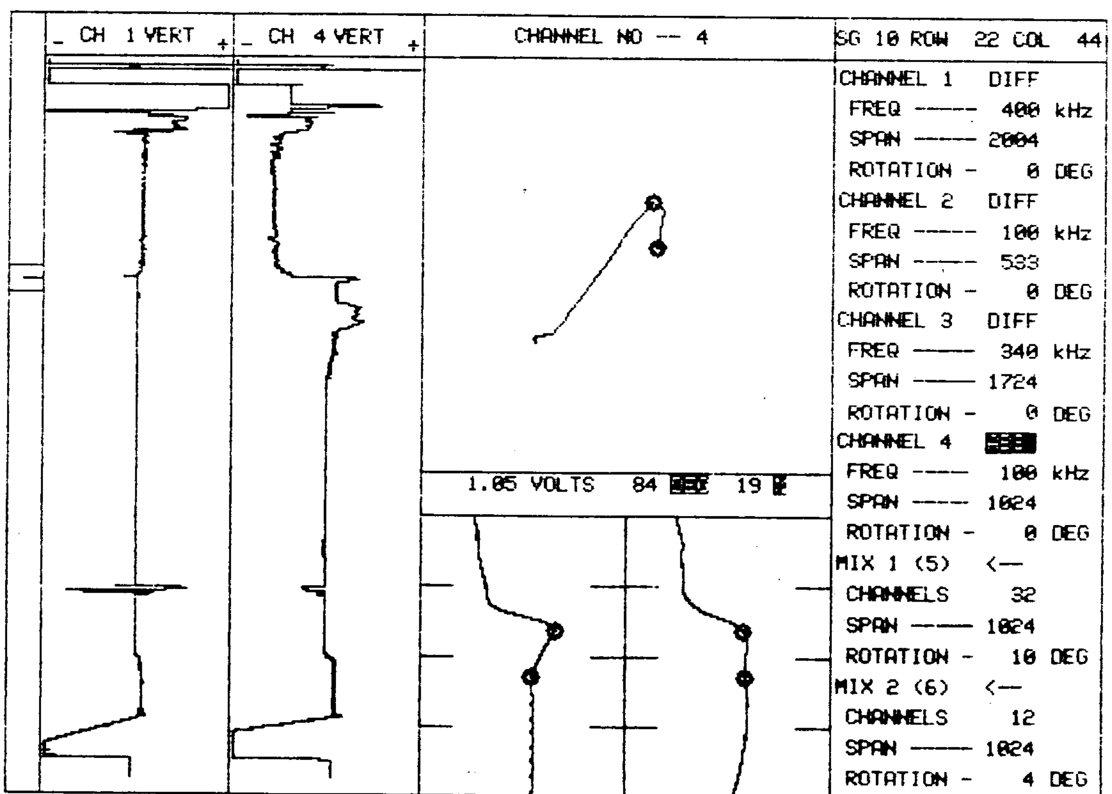
SG 10 ROW 32 COL 71

CHANNEL 1 DIFF
FREQ ----- 400 kHz
SPAN ----- 2064
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 100 kHz
SPAN ----- 554
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 340 kHz
SPAN ----- 784
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 269
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 32
SPAN ----- 2194
ROTATION - 10 DEG
MIX 2 (6) <--
CHANNELS 12
SPAN ----- 2274
ROTATION - 4 DEG

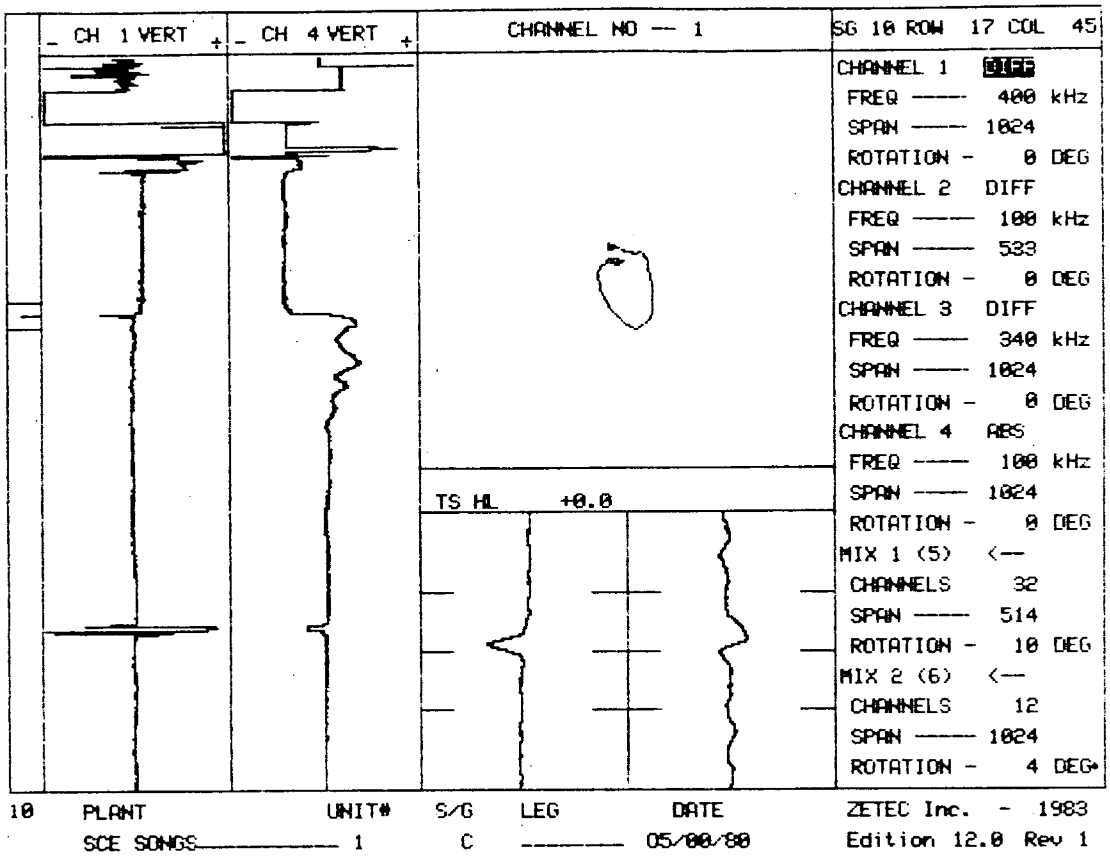
10	PLANT	UNIT#	S/G	LEG	DATE	ZETEC Inc. - 1983
	SCE SONGS	1	C	-------	05/00/88	Edition 12.0 Rev 1

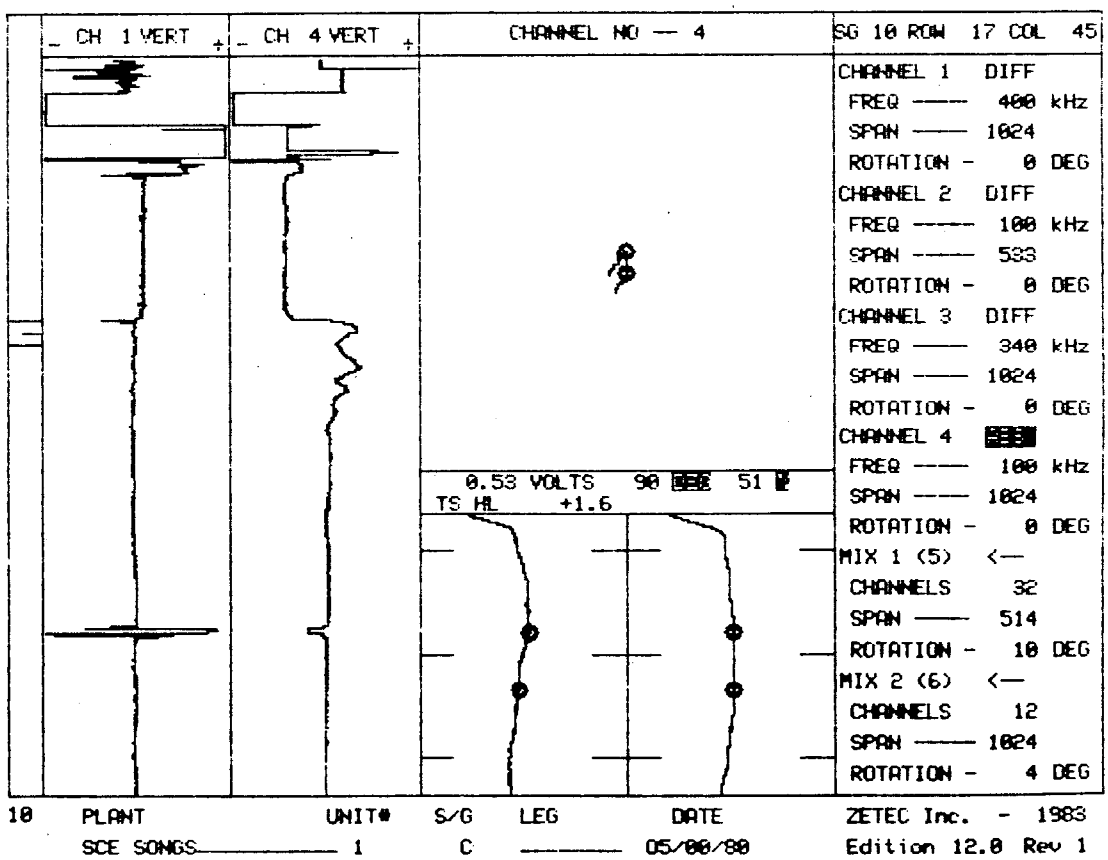


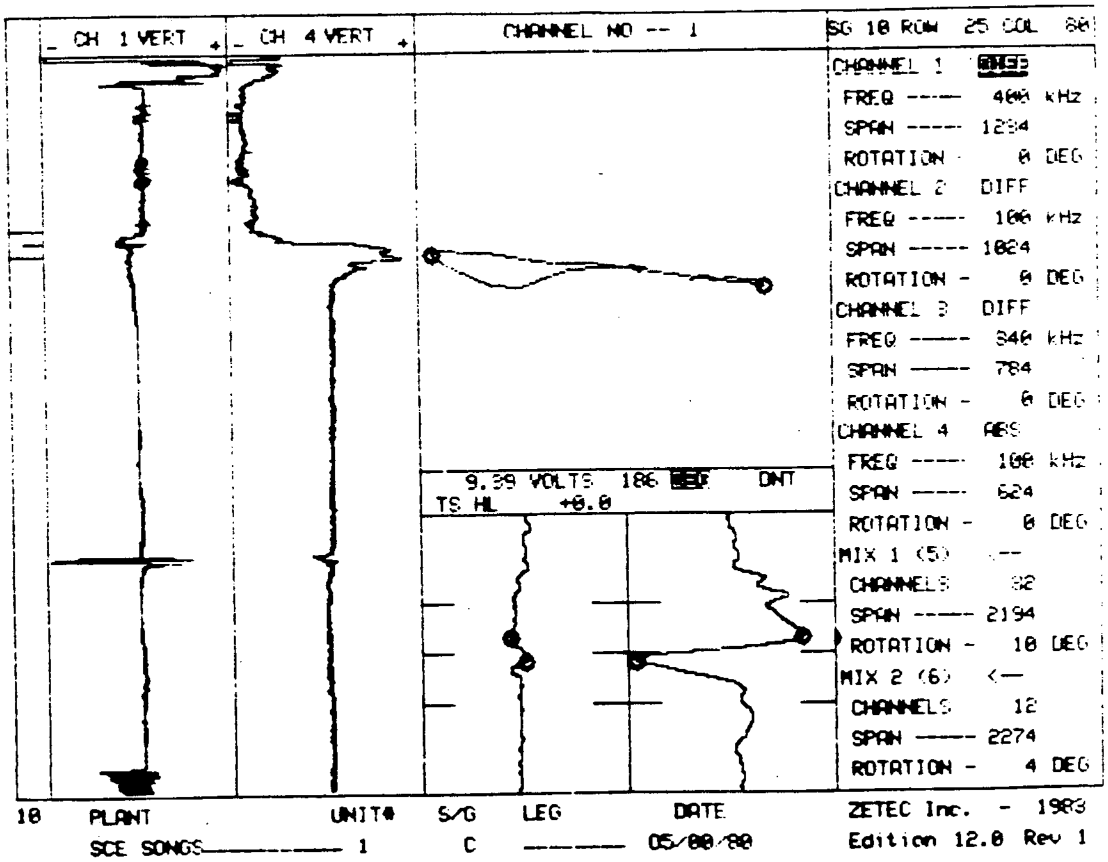
10	PLANT	UNIT#	S/G	LEG	DATE	ZETEC Inc. - 1983
	SCE SONGS	1	C		05/00/80	Edition 12.0 Rev 1



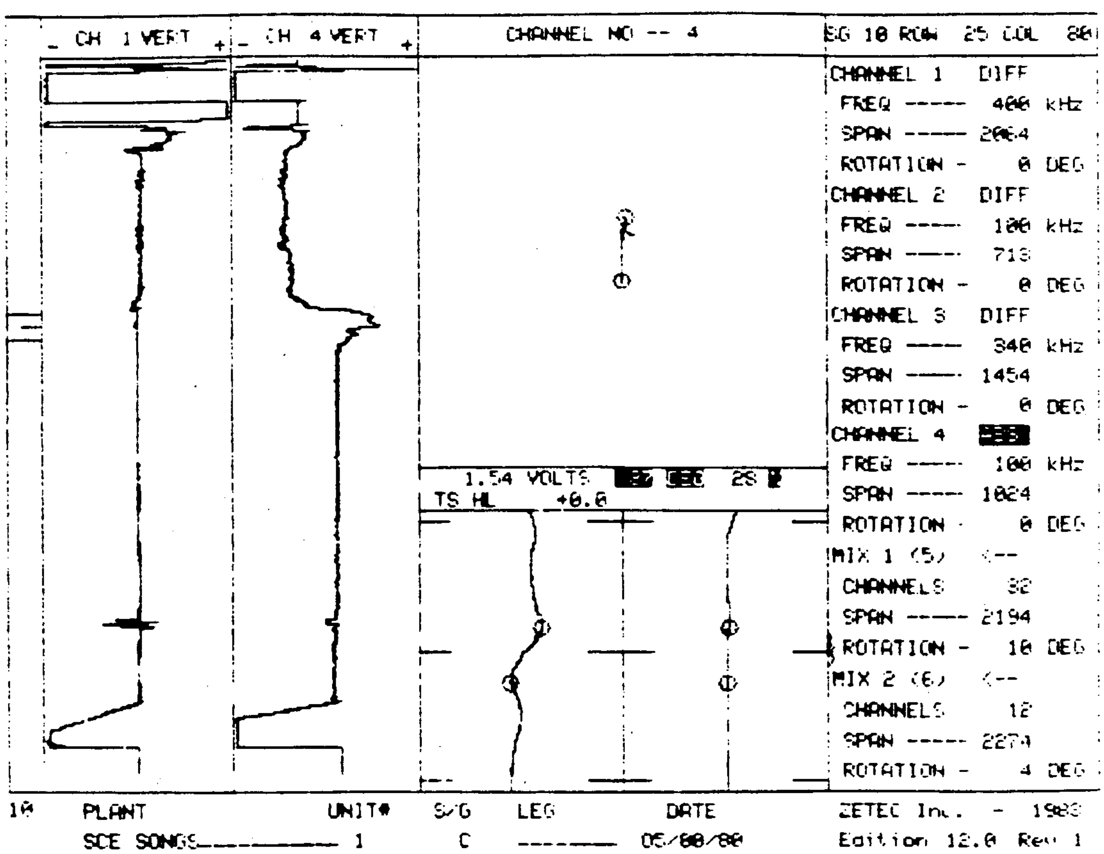
10	PLANT	UNIT#	S/G	LEG	DATE	ZETEC Inc. - 1983
	SCE SONGS	1	C		05/00/80	Edition 12.0 Rev 1


CH 1 VERT
CH 4 VERT
CHANNEL NO — 1
SG 10 ROW 17 COL 45
CHANNEL 1 DIFF
FREQ —— 400 kHz
SPAN —— 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ —— 100 kHz
SPAN —— 533
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ —— 340 kHz
SPAN —— 1024
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ —— 100 kHz
SPAN —— 1024
ROTATION - 0 DEG
MIX 1 (5) <—
CHANNELS 32
SPAN —— 514
ROTATION - 10 DEG
MIX 2 (6) <—
CHANNELS 12
SPAN —— 1024
ROTATION - 4 DEG
TS HL +0.0
10 PLANT UNIT# S/G LEG DATE
SCE SONGS 1 C 05/00/80
ZETEC Inc. - 1983
Edition 12.0 Rev 1


CH 1 VERT
CH 4 VERT
CHANNEL NO — 4
SG 10 ROW 17 COL 45
CHANNEL 1 DIFF
FREQ —— 400 kHz
SPAN —— 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ —— 100 kHz
SPAN —— 533
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ —— 340 kHz
SPAN —— 1024
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ —— 100 kHz
SPAN —— 1024
ROTATION - 0 DEG
MIX 1 (5) <—
CHANNELS 32
SPAN —— 514
ROTATION - 10 DEG
MIX 2 (6) <—
CHANNELS 12
SPAN —— 1024
ROTATION - 4 DEG
0.53 VOLTS 90 DEG 51
TS HL +1.6
10 PLANT UNIT# S/G LEG DATE
SCE SONGS 1 C 05/00/80
ZETEC Inc. - 1983
Edition 12.0 Rev 1

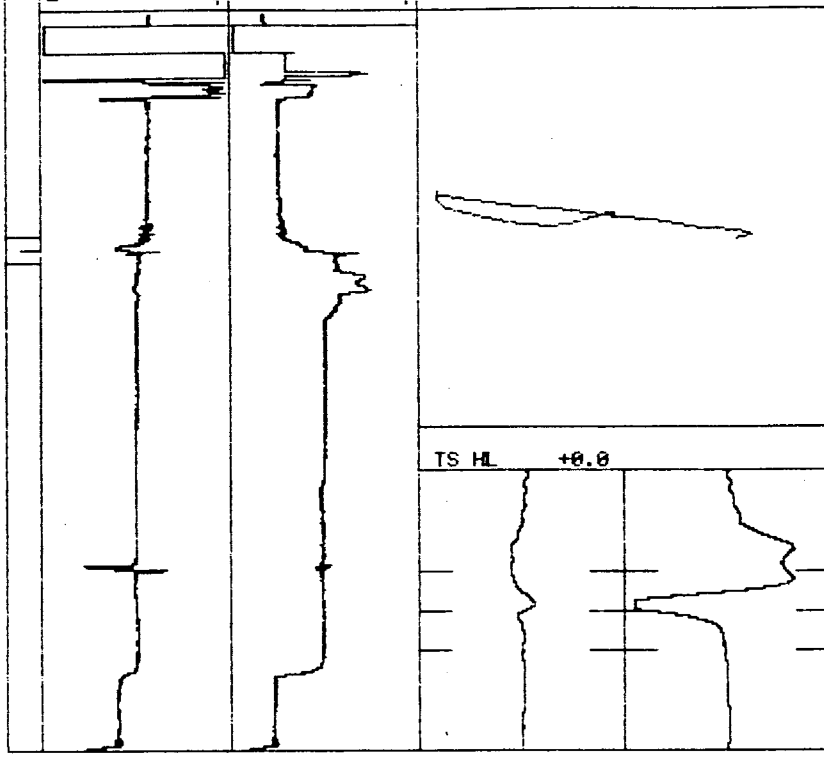


CH 1 VERT
CH 4 VERT
CHANNEL NO -- 1
SG 10 ROW 25 COL 80
CHANNEL 1
FREQ ---- 400 kHz
SPAN ---- 1234
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ---- 100 kHz
SPAN ---- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ---- 340 kHz
SPAN ---- 784
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ---- 100 kHz
SPAN ---- 624
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 32
SPAN ---- 2194
ROTATION - 10 DEG
MIX 2 (6) <--
CHANNELS 12
SPAN ---- 2274
ROTATION - 4 DEG
9.39 VOLTS 186
DNT
TS HL +0.0
10 PLANT UNIT# S/G LEG DATE
SCE SONGS 1 C 05/00/00
ZETEC Inc. - 1983
Edition 12.0 Rev 1



CH 1 VERT
CH 4 VERT
CHANNEL NO -- 4
SG 10 ROW 25 COL 80
CHANNEL 1 DIFF
FREQ ---- 400 kHz
SPAN ---- 2064
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ---- 100 kHz
SPAN ---- 713
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ---- 340 kHz
SPAN ---- 1454
ROTATION - 0 DEG
CHANNEL 4
FREQ ---- 100 kHz
SPAN ---- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 32
SPAN ---- 2194
ROTATION - 10 DEG
MIX 2 (6) <--
CHANNELS 12
SPAN ---- 2274
ROTATION - 4 DEG
1.54 VOLTS
TS HL +0.0
10 PLANT UNIT# S/G LEG DATE
SCE SONGS 1 C 05/00/00
ZETEC Inc. - 1983
Edition 12.0 Rev 1

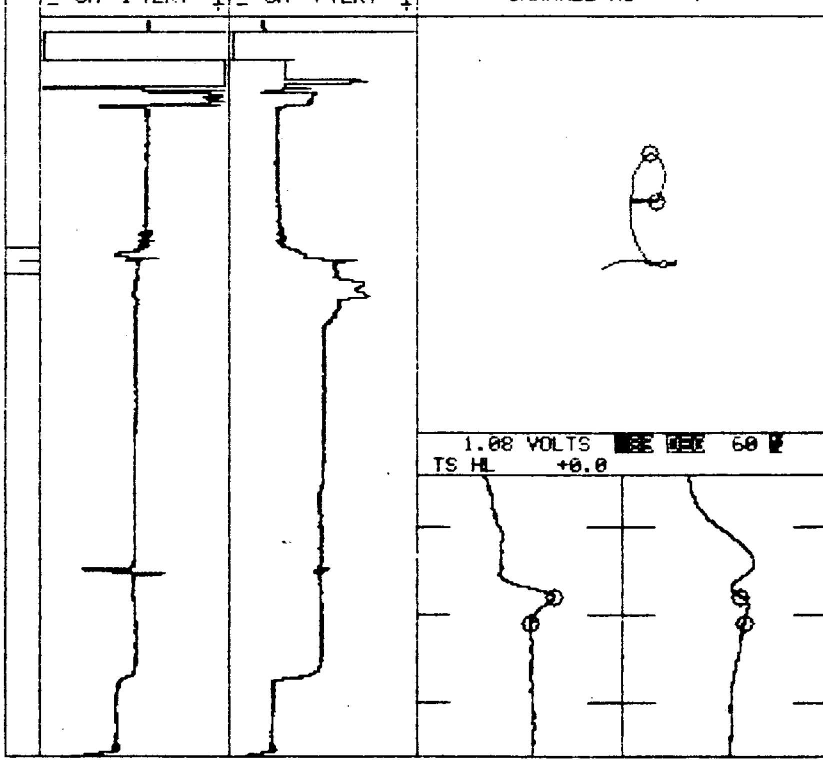
CH 1 VERT	CH 4 VERT	CHANNEL NO — 1	SG 10 ROW 10 COL 43



CHANNEL 1 DIFF
FREQ —— 400 kHz
SPAN —— 1904
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ —— 100 kHz
SPAN —— 533
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ —— 340 kHz
SPAN —— 1024
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ —— 100 kHz
SPAN —— 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 32
SPAN —— 514
ROTATION - 10 DEG
MIX 2 (6) <--
CHANNELS 12
SPAN —— 1024
ROTATION - 4 DEG

10	PLANT	UNIT#	S/G	LEG	DATE	ZETEC Inc. - 1983
	SCE SONGS	1	C	———	05/00/80	Edition 12.0 Rev 1

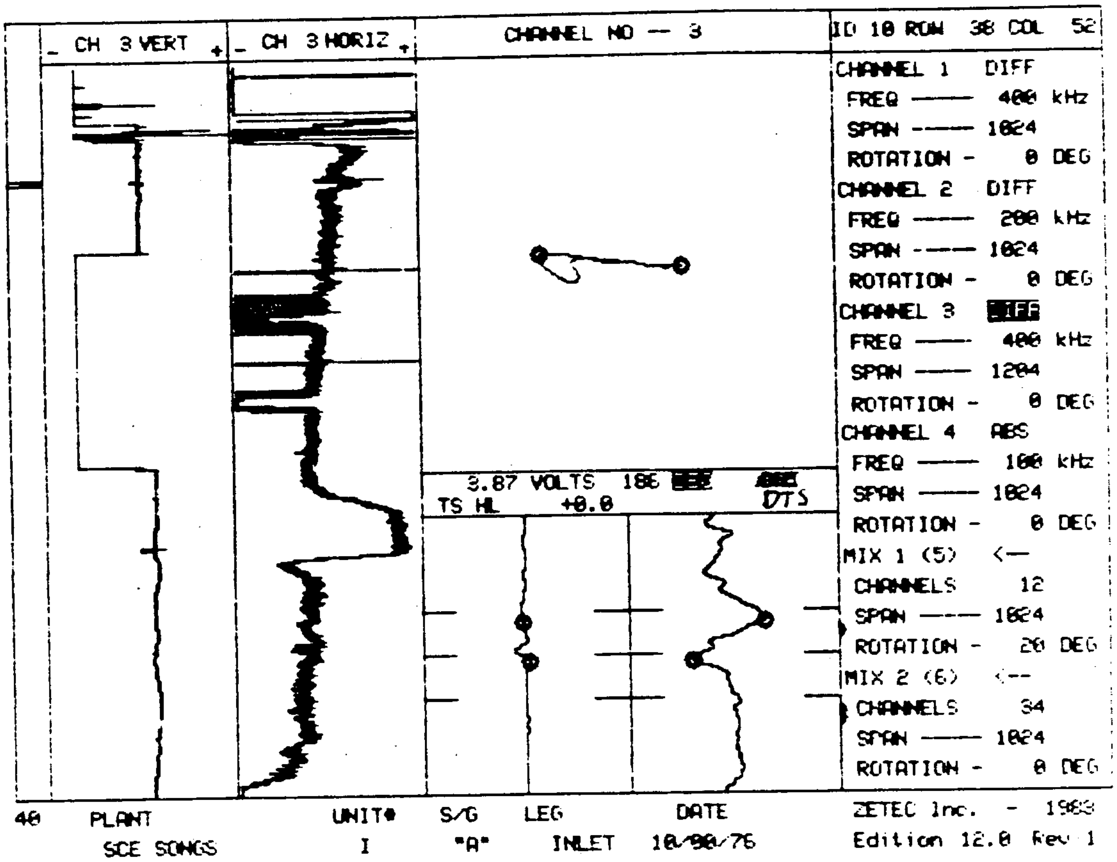
CH 1 VERT	CH 4 VERT	CHANNEL NO -- 4	SG 10 ROW 10 COL 43



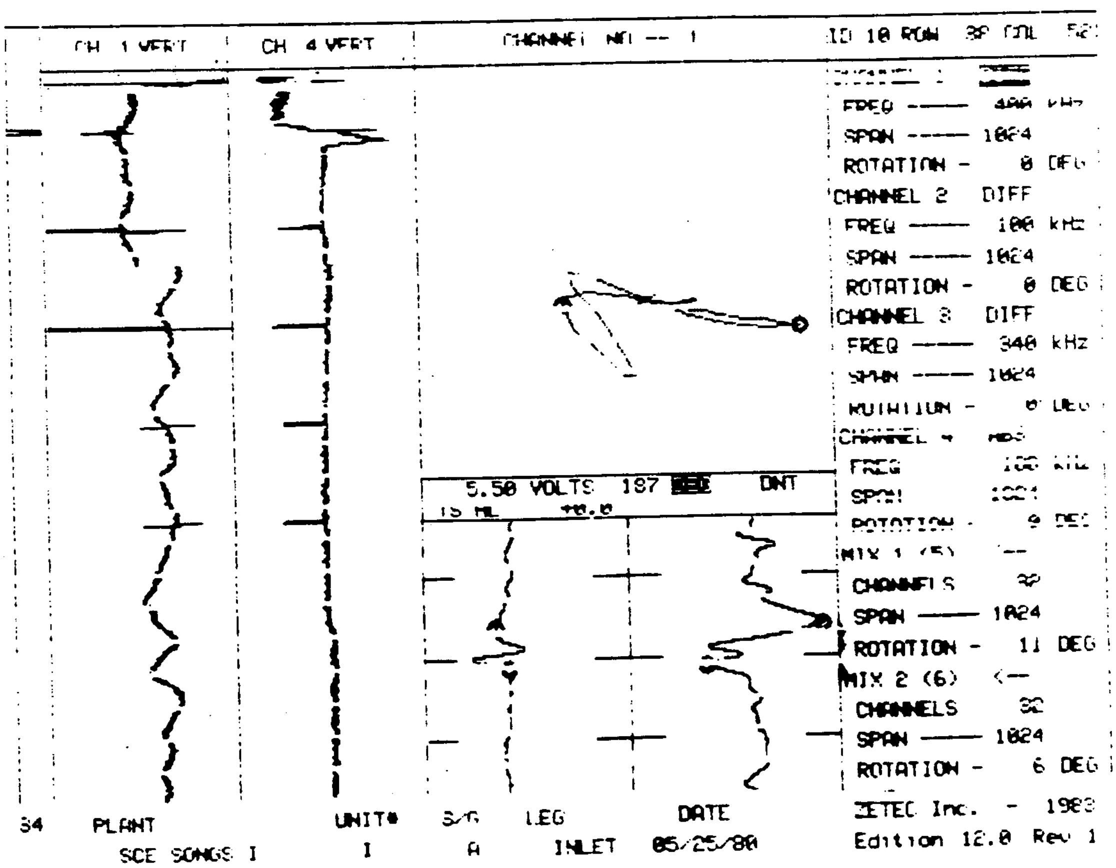
CHANNEL 1 DIFF
FREQ —— 400 kHz
SPAN —— 1904
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ —— 100 kHz
SPAN —— 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ —— 340 kHz
SPAN —— 1514
ROTATION - 6 DEG
CHANNEL 4 [illegible]
FREQ —— 100 kHz
SPAN —— 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 32
SPAN —— 514
ROTATION - 10 DEG
MIX 2 (6) <--
CHANNELS 12
SPAN —— 1024
ROTATION - 4 DEG

10	PLANT	UNIT#	S/G	LEG	DATE	ZETEC Inc. - 1983
	SCE SONGS	1	C	———	05/00/80	Edition 12.0 Rev 1

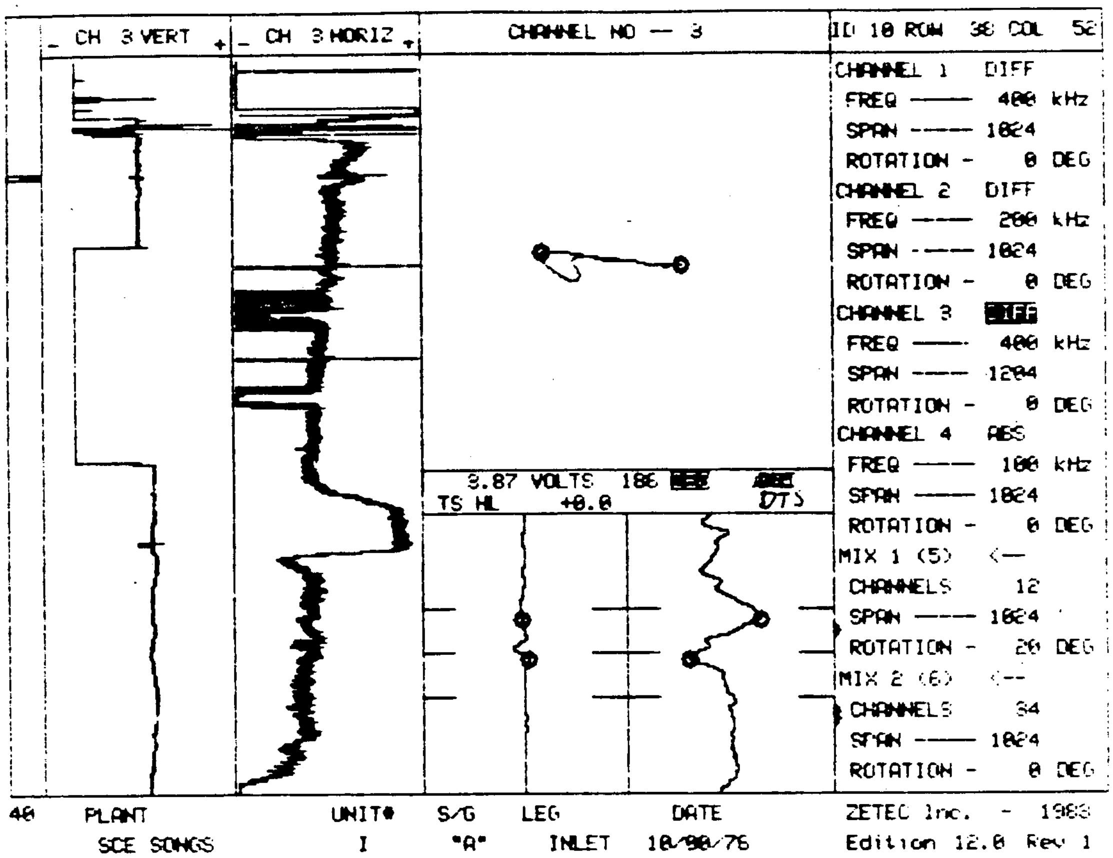
APPENDIX C



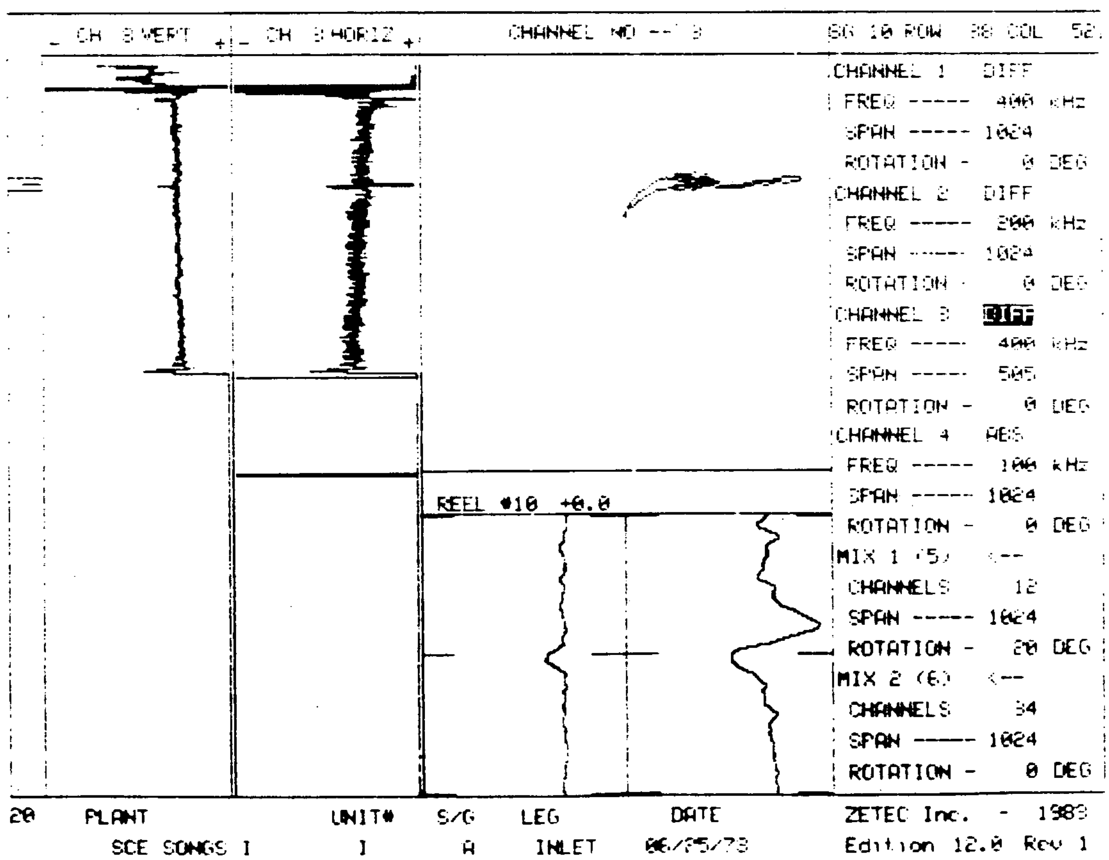
CH 3 VERT
CH 3 HORIZ
CHANNEL NO — 3
ID 18 ROW 38 COL 52
CHANNEL 1 DIFF
FREQ —— 400 kHz
SPAN —— 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ —— 200 kHz
SPAN —— 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ —— 400 kHz
SPAN —— 1204
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ —— 100 kHz
SPAN —— 1024
ROTATION - 0 DEG
MIX 1 (5) <—
CHANNELS 12
SPAN —— 1024
ROTATION - 20 DEG
MIX 2 (6) <—
CHANNELS 34
SPAN —— 1024
ROTATION - 0 DEG
3.87 VOLTS 186 DEG
TS HL +0.0
DTS
40 PLANT UNIT# S/G LEG DATE
SCE SONGS I "A" INLET 10/00/76
ZETEC Inc. - 1983
Edition 12.0 Rev 1



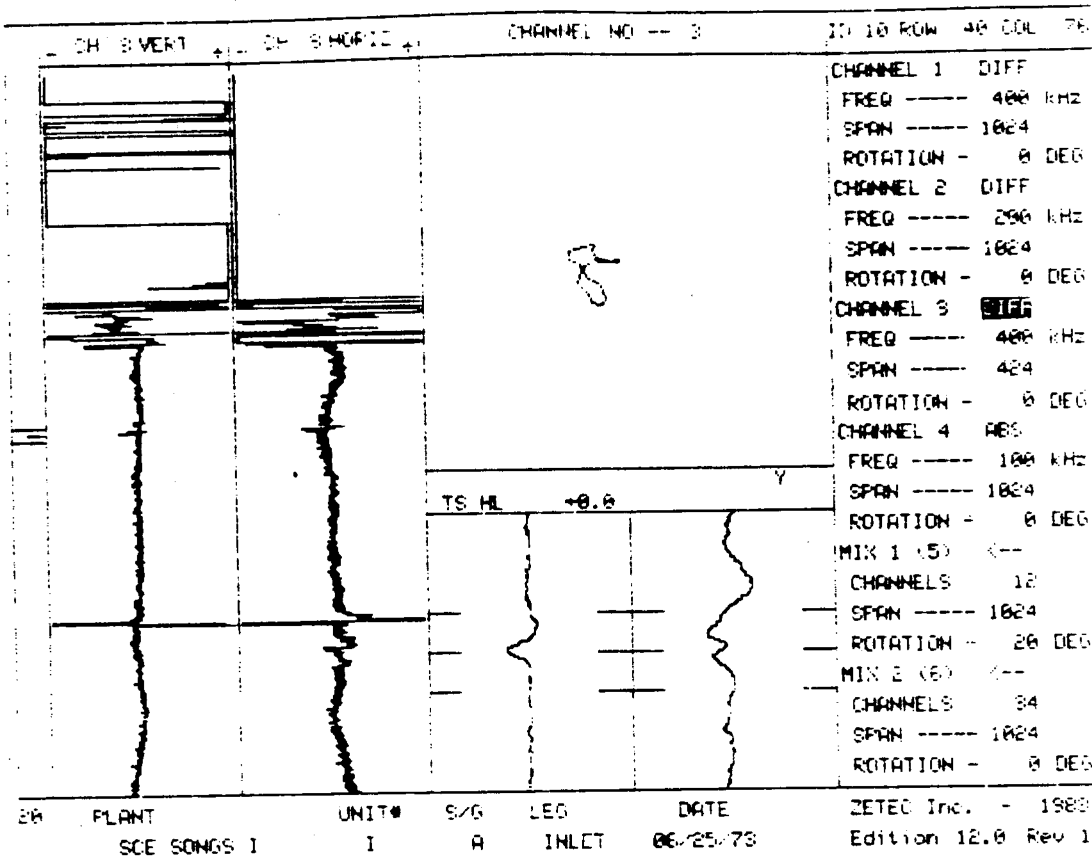
CH 1 VERT
CH 4 VERT
CHANNEL NO — 1
ID 18 ROW 38 COL 52
FREQ
SPAN —— 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ —— 100 kHz
SPAN —— 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ —— 340 kHz
SPAN —— 1024
5.50 VOLTS 187 DEG DNT
TS HL +0.0
CHANNELS
SPAN —— 1024
ROTATION - 11 DEG
MIX 2 (6) <—
CHANNELS 32
SPAN —— 1024
ROTATION - 6 DEG
34 PLANT UNIT# S/G LEG DATE
SCE SONGS I I A INLET 05/25/80
ZETEC Inc. - 1983
Edition 12.0 Rev 1

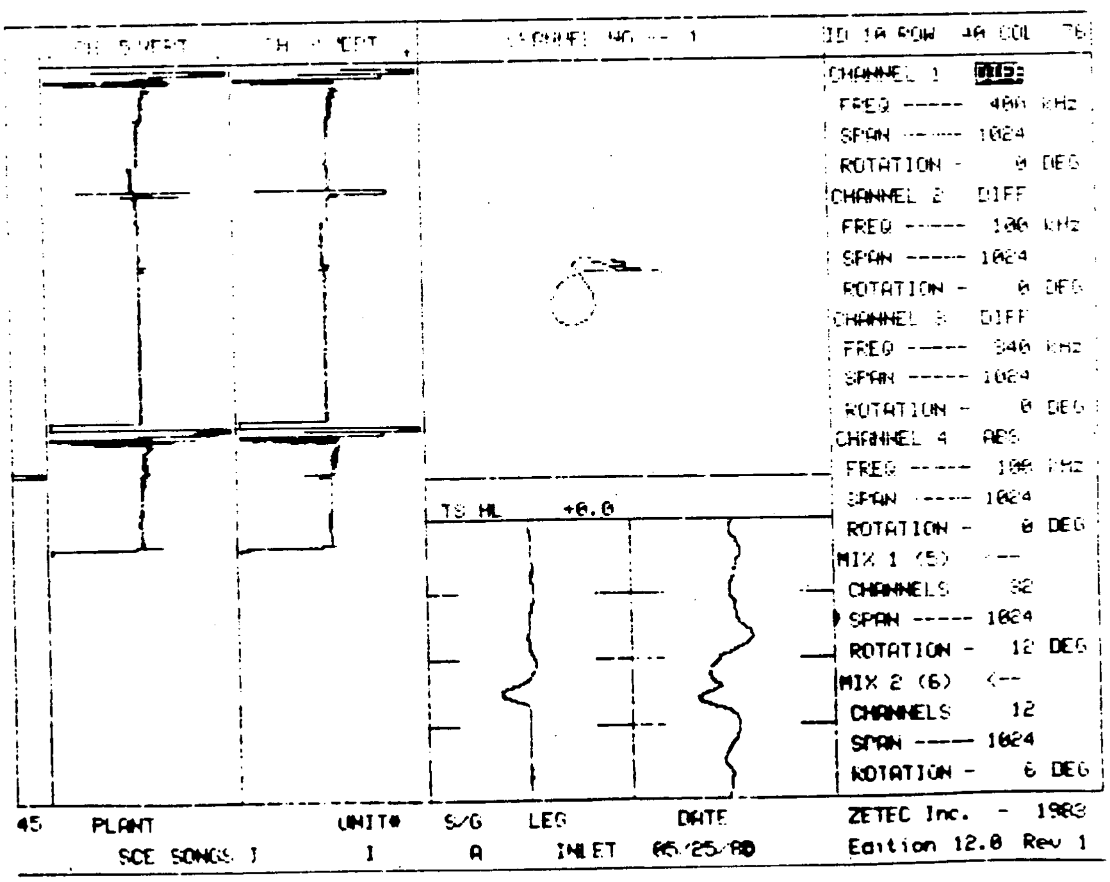


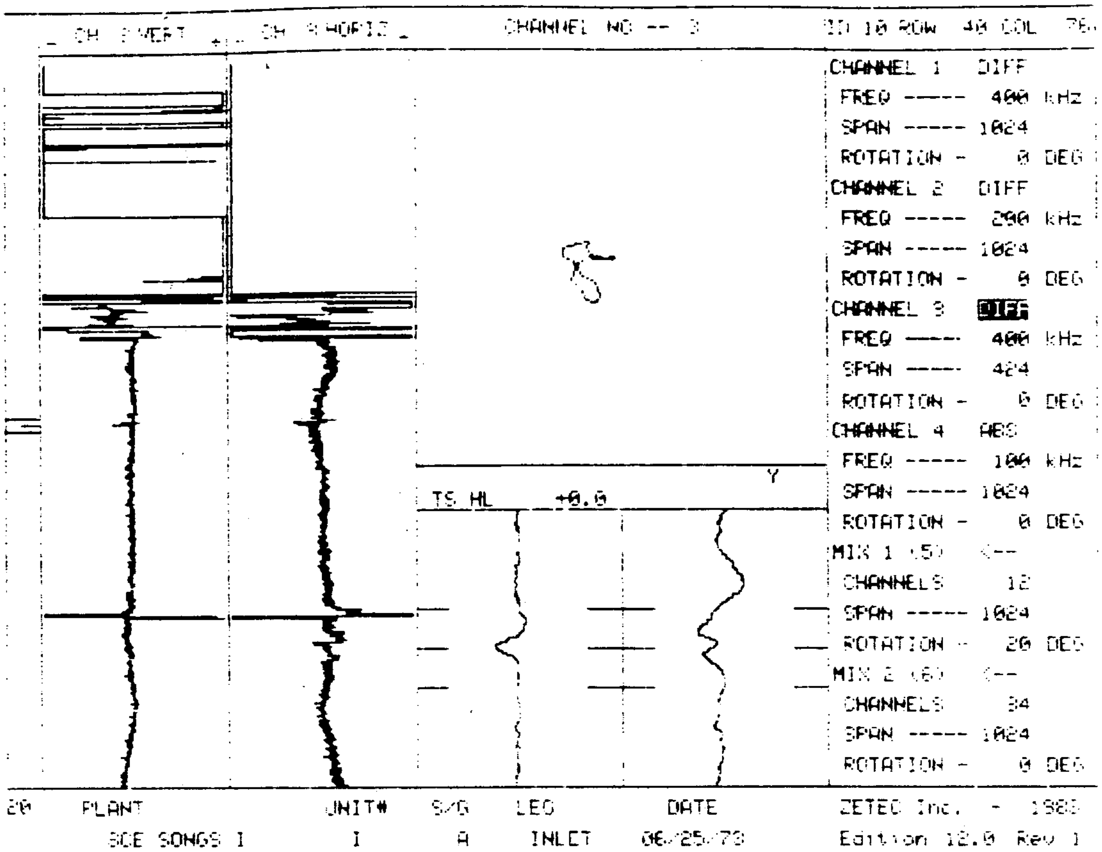
_ CH 3 VERT +
_ CH 3 HORIZ +
CHANNEL NO — 3
ID 10 ROW 38 COL 52
CHANNEL 1 DIFF
FREQ ——— 400 kHz
SPAN ——— 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ——— 200 kHz
SPAN ——— 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ——— 400 kHz
SPAN ——— 1204
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ——— 100 kHz
SPAN ——— 1024
ROTATION - 0 DEG
MIX 1 (5) <—
CHANNELS 12
SPAN ——— 1024
ROTATION - 20 DEG
MIX 2 (6) <—
CHANNELS 34
SPAN ——— 1024
ROTATION - 0 DEG
3.87 VOLTS 186 DEG ABS
TS HL +0.0
DTS
40
PLANT
SCE SONGS
UNIT#
I
S/G
"A"
LEG
INLET
DATE
10/00/76
ZETEC Inc. - 1983
Edition 12.0 Rev 1

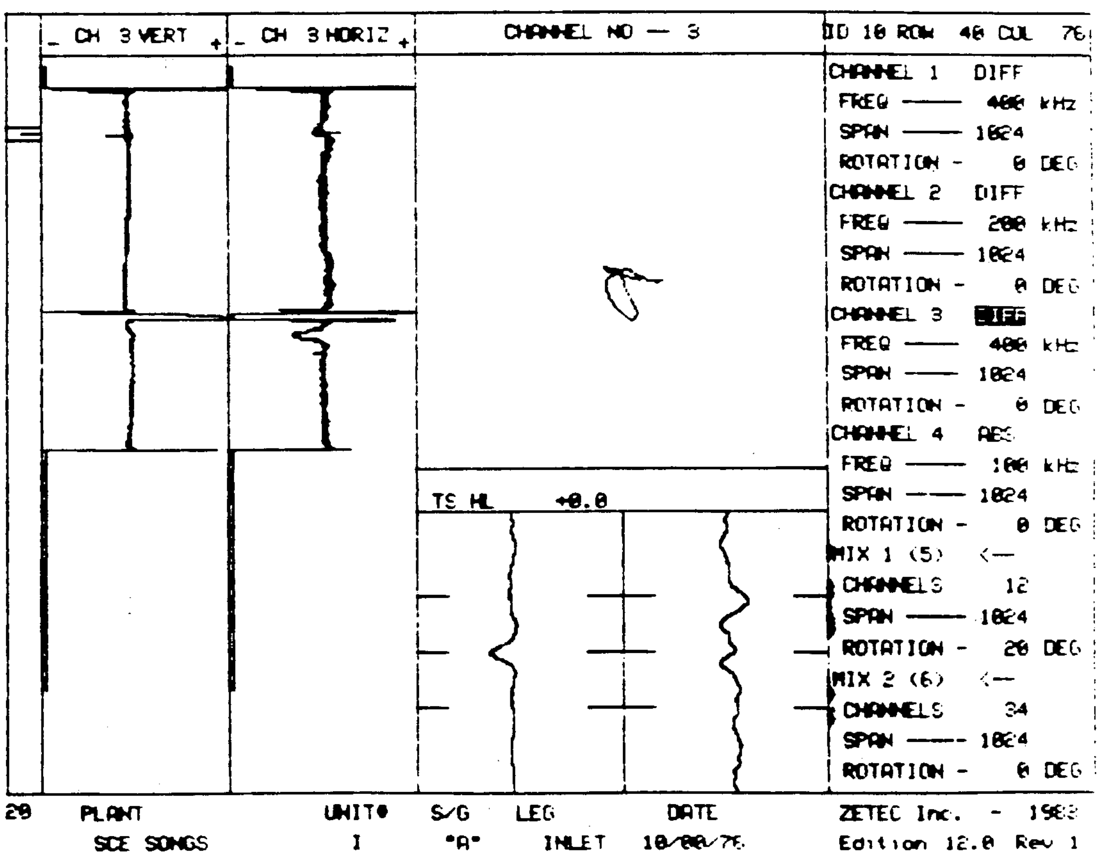


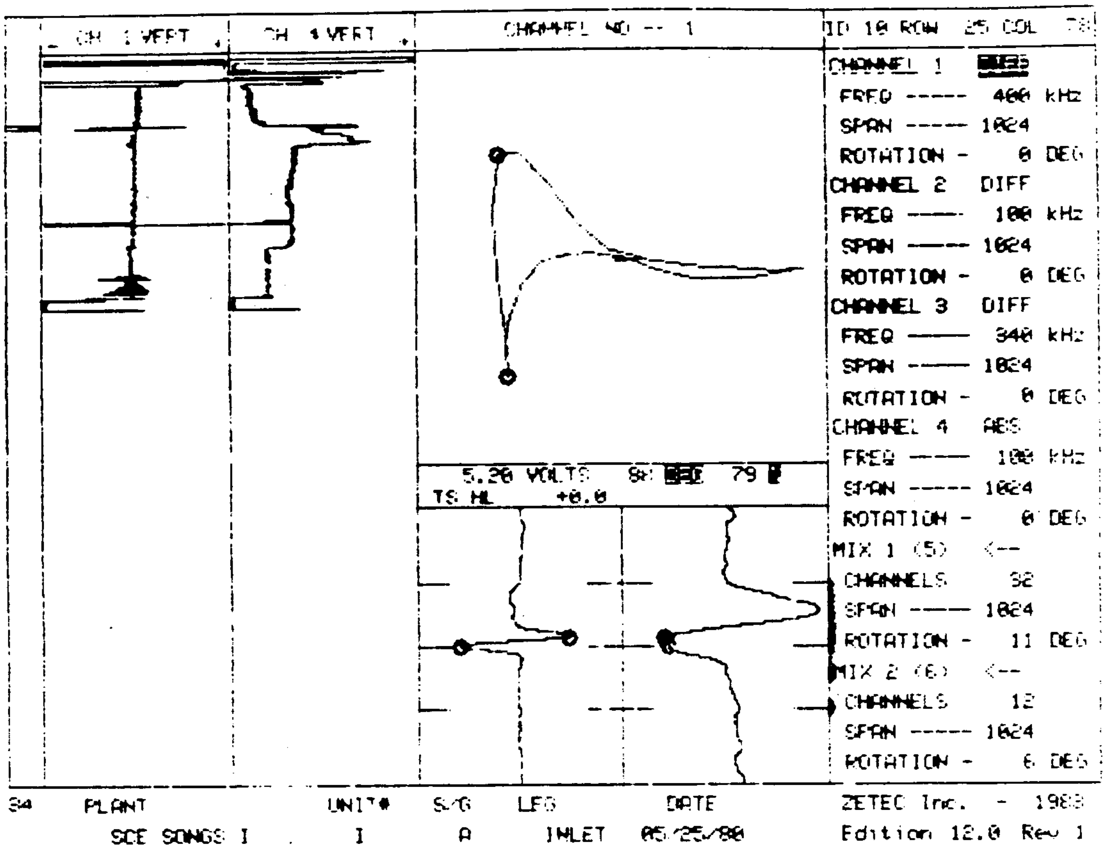
_ CH 3 VERT +
_ CH 3 HORIZ +
CHANNEL NO — 3
SG 10 ROW 38 COL 52
CHANNEL 1 DIFF
FREQ ——— 400 kHz
SPAN ——— 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ——— 200 kHz
SPAN ——— 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ——— 400 kHz
SPAN ——— 505
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ——— 100 kHz
SPAN ——— 1024
ROTATION - 0 DEG
MIX 1 (5) <—
CHANNELS 12
SPAN ——— 1024
ROTATION - 20 DEG
MIX 2 (6) <—
CHANNELS 34
SPAN ——— 1024
ROTATION - 0 DEG
REEL #10 +0.0
20
PLANT
SCE SONGS I
UNIT#
I
S/G
A
LEG
INLET
DATE
06/25/73
ZETEC Inc. - 1983
Edition 12.0 Rev 1

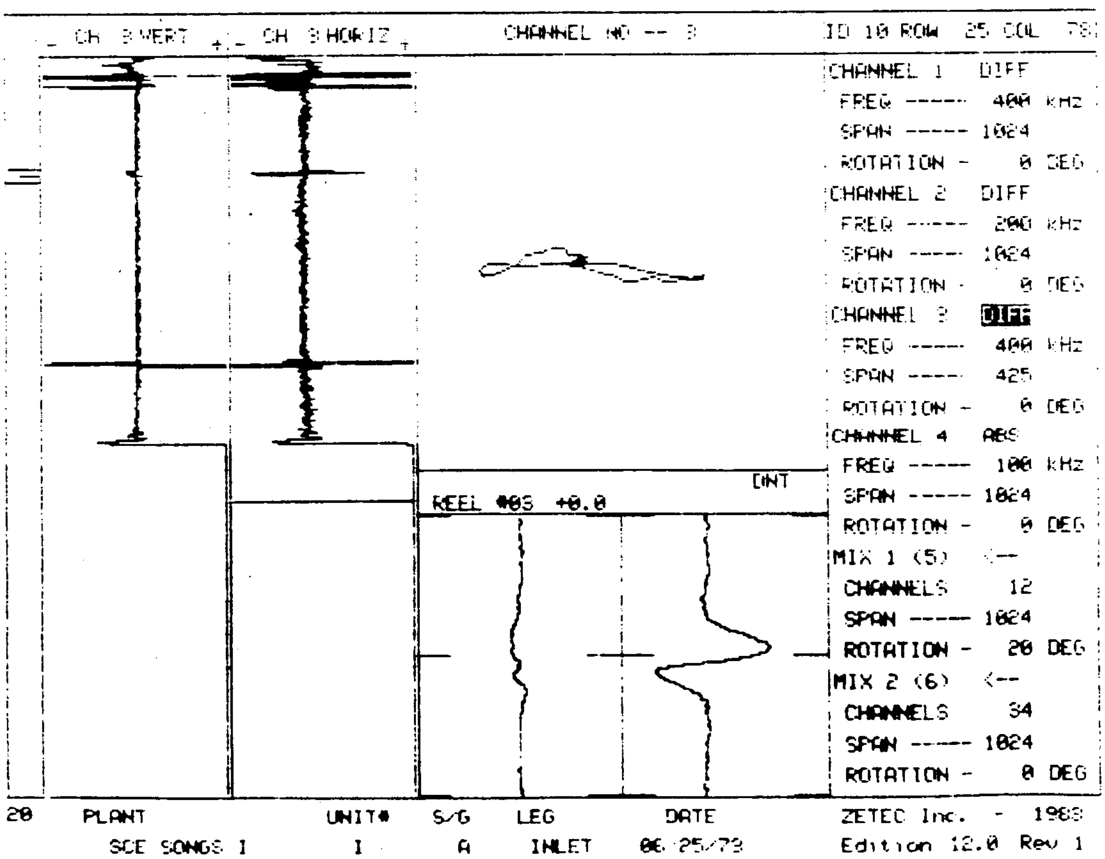

CH 3 VERT
CH 3 HORIZ
CHANNEL NO -- 3
ID 10 ROW 40 COL 76
CHANNEL 1 DIFF
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 200 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 400 kHz
SPAN ----- 424
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 12
SPAN ----- 1024
ROTATION - 20 DEG
MIX 2 (6) <--
CHANNELS 34
SPAN ----- 1024
ROTATION - 0 DEG
TS HL +0.0
Y
20 PLANT UNIT# S/G LEG DATE
SCE SONGS I I A INLET 06/25/73
ZETEC Inc. - 1983
Edition 12.0 Rev 1

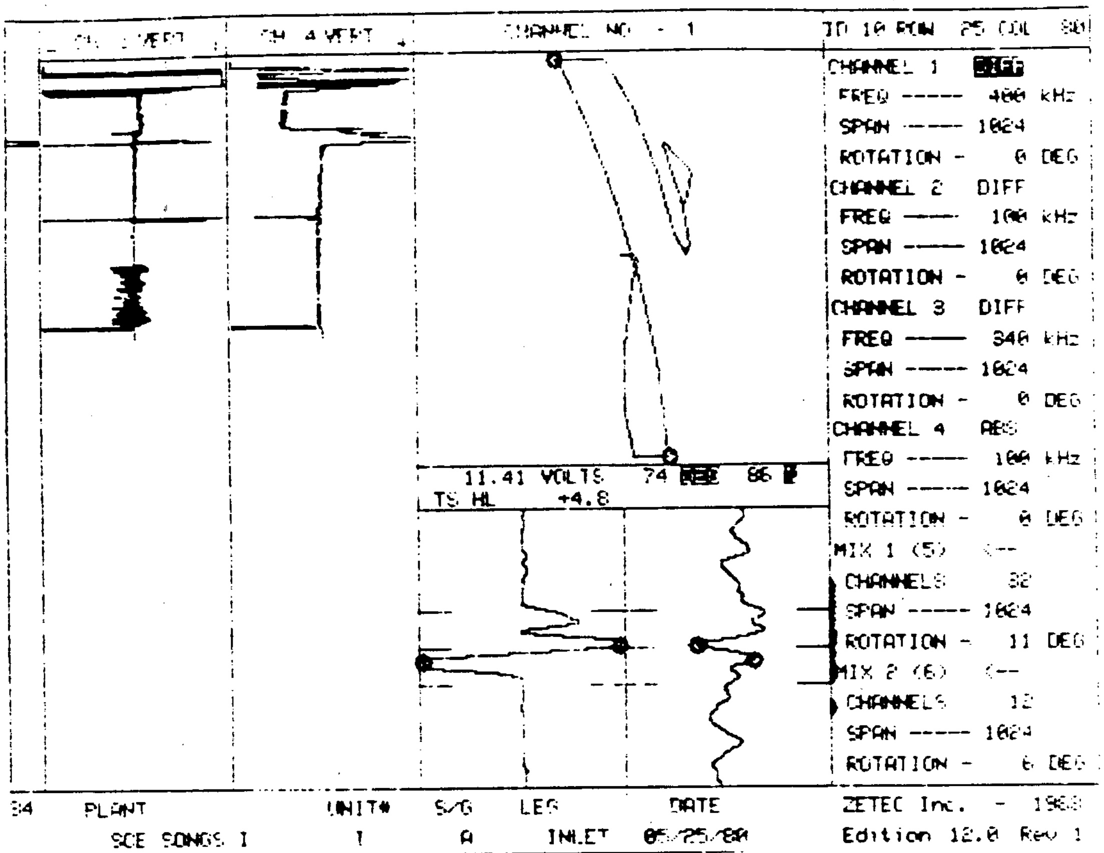

CH 3 VERT
CH 3 VERT
CHANNEL NO -- 1
ID 10 ROW 40 COL 76
CHANNEL 1 DIFF
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 340 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 32
SPAN ----- 1024
ROTATION - 12 DEG
MIX 2 (6) <--
CHANNELS 12
SPAN ----- 1024
ROTATION - 6 DEG
TS HL +0.0
45 PLANT UNIT# S/G LEG DATE
SCE SONGS I I A INLET 05/25/80
ZETEC Inc. - 1983
Edition 12.0 Rev 1

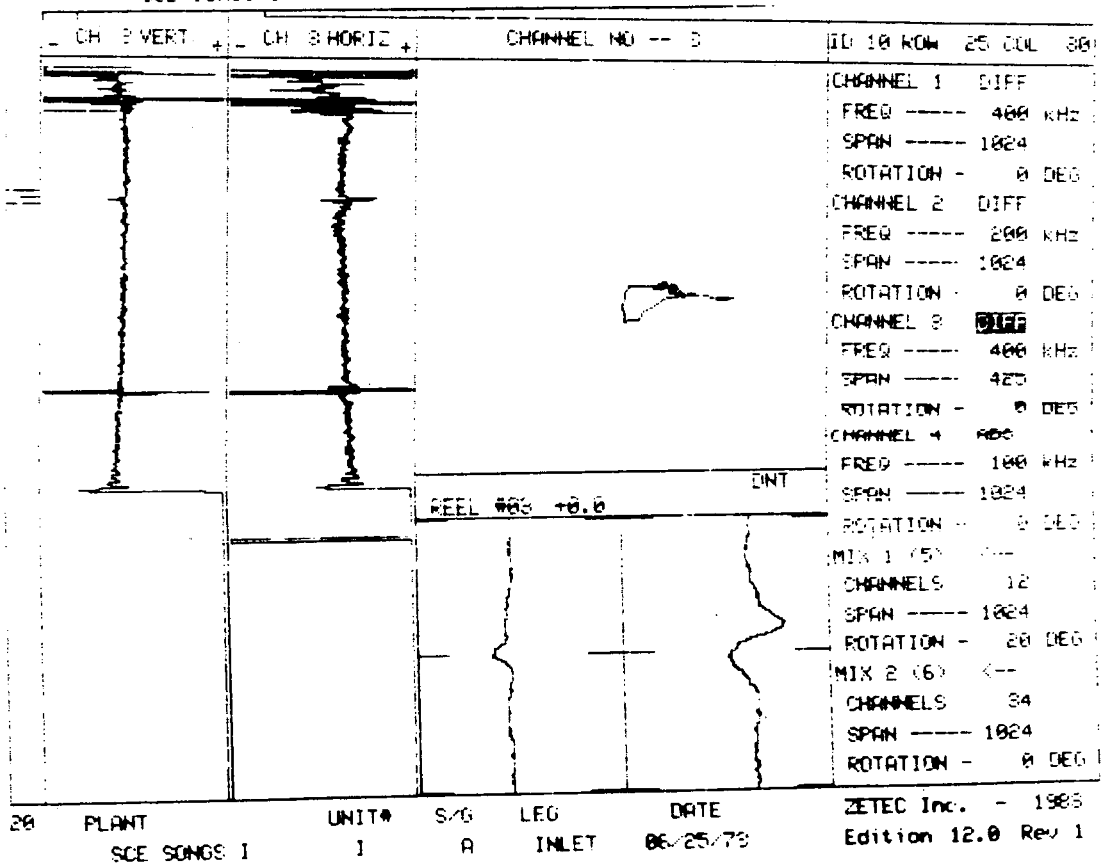

CH 3 VERT
CH 3 HORIZ
CHANNEL NO -- 3
ID 10 ROW 40 COL 76
CHANNEL 1 DIFF
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 200 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 400 kHz
SPAN ----- 424
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 12
SPAN ----- 1024
ROTATION - 20 DEG
MIX 2 (6) <--
CHANNELS 34
SPAN ----- 1024
ROTATION - 0 DEG
Y
TS HL +0.0
20 PLANT UNIT# S/G LEG DATE
SCE SONGS I I A INLET 06/25/73
ZETEC Inc. - 1983
Edition 12.0 Rev 1


CH 3 VERT
CH 3 HORIZ
CHANNEL NO — 3
ID 10 ROW 40 COL 76
CHANNEL 1 DIFF
FREQ —— 400 kHz
SPAN —— 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ —— 200 kHz
SPAN —— 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ —— 400 kHz
SPAN —— 1024
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ —— 100 kHz
SPAN —— 1024
ROTATION - 0 DEG
MIX 1 (5) <—
CHANNELS 12
SPAN —— 1024
ROTATION - 20 DEG
MIX 2 (6) <—
CHANNELS 34
SPAN —— 1024
ROTATION - 0 DEG
TS HL +0.0
20 PLANT UNIT# S/G LEG DATE
SCE SONGS I "A" INLET 10/00/76
ZETEC Inc. - 1983
Edition 12.0 Rev 1


CH 1 VERT
CH 4 VERT
CHANNEL NO -- 1
ID 10 ROW 25 COL 78
CHANNEL 1
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 340 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 32
SPAN ----- 1024
ROTATION - 11 DEG
MIX 2 (6) <--
CHANNELS 12
SPAN ----- 1024
ROTATION - 6 DEG
5.20 VOLTS
TS HL +0.0
34 PLANT UNIT# S/G LEG DATE
SCE SONGS I I A INLET 05/25/80
ZETEC Inc. - 1983
Edition 12.0 Rev 1

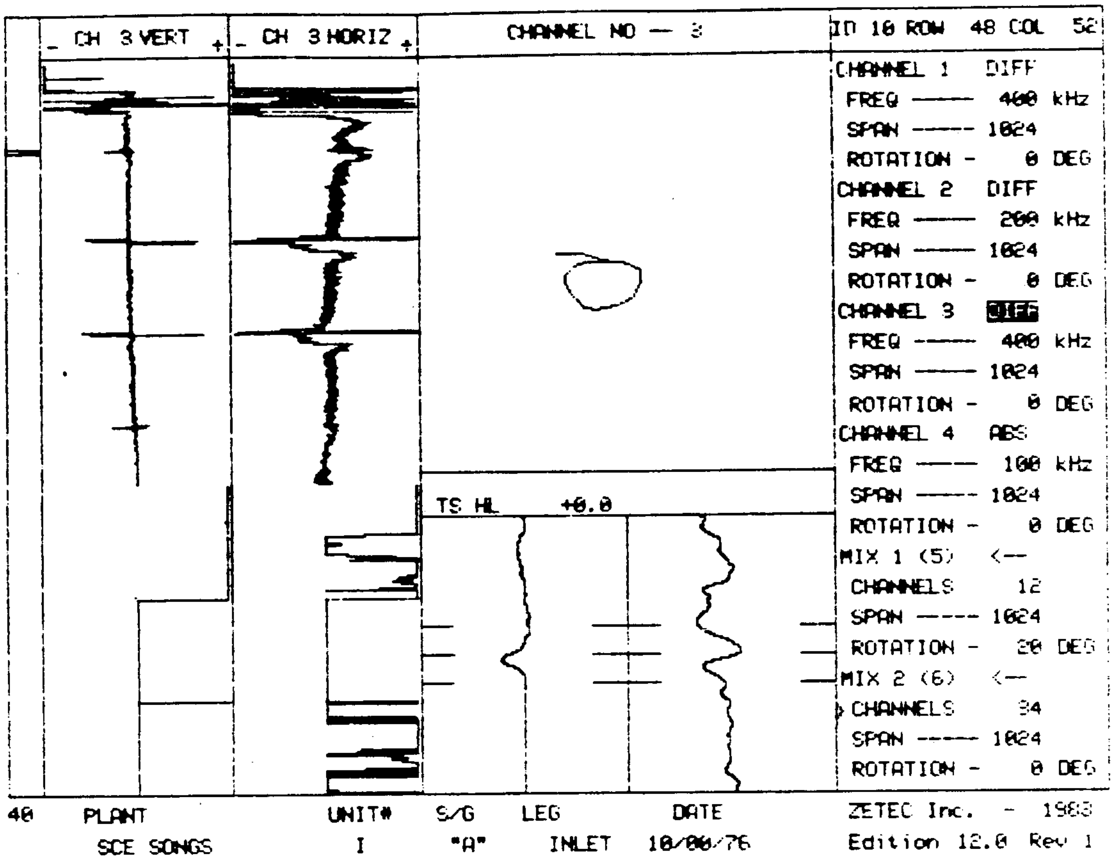

CH 3 VERT
CH 3 HORIZ
CHANNEL NO -- 3
ID 10 ROW 25 COL 78
CHANNEL 1 DIFF
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 200 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 400 kHz
SPAN ----- 425
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 12
SPAN ----- 1024
ROTATION - 20 DEG
MIX 2 (6) <--
CHANNELS 34
SPAN ----- 1024
ROTATION - 0 DEG
DNT
REEL #05 +0.0
20 PLANT UNIT# S/G LEG DATE
SCE SONGS I I A INLET 06/25/73
ZETEC Inc. - 1983
Edition 12.0 Rev 1

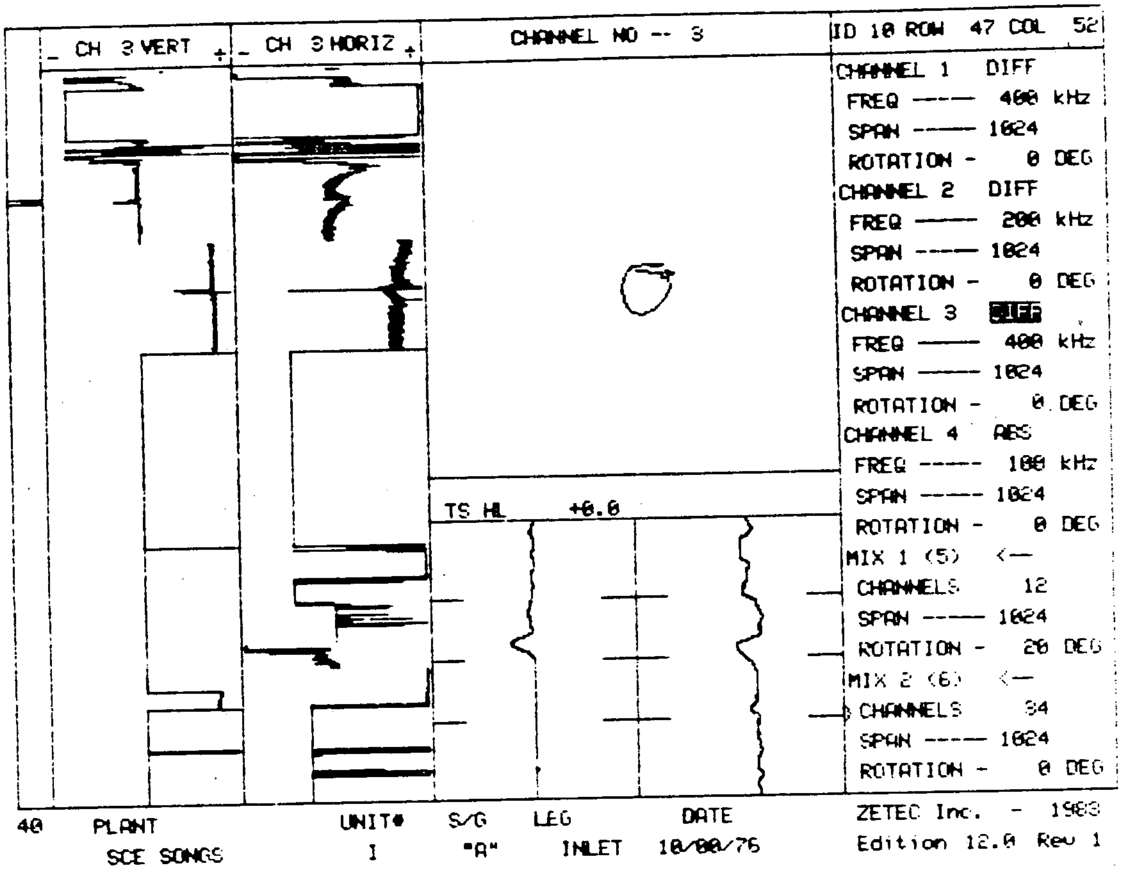

CH 4 VERT
CHANNEL NO - 1
ID 10 ROW 25 COL
CHANNEL 1
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 340 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 32
SPAN ----- 1024
ROTATION - 11 DEG
MIX 2 (6) <--
CHANNELS 12
SPAN ----- 1024
ROTATION - 6 DEG
11.41 VOLTS 74
TS HL +4.8
PLANT
SCE SONGS I
UNIT#
1
S/G
A
LEG
INLET
DATE
05/25/80
ZETEC Inc. - 1983
Edition 12.0 Rev 1


CH 3 VERT
CH 3 HORIZ
CHANNEL NO -- 3
ID 10 ROW 25 COL
CHANNEL 1 DIFF
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 200 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 400 kHz
SPAN ----- 425
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 12
SPAN ----- 1024
ROTATION - 20 DEG
MIX 2 (6) <--
CHANNELS 34
SPAN ----- 1024
ROTATION - 0 DEG
INT
REEL #03 +0.0
20
PLANT
SCE SONGS I
UNIT#
1
S/G
A
LEG
INLET
DATE
06/25/79
ZETEC Inc. - 1983
Edition 12.0 Rev 1

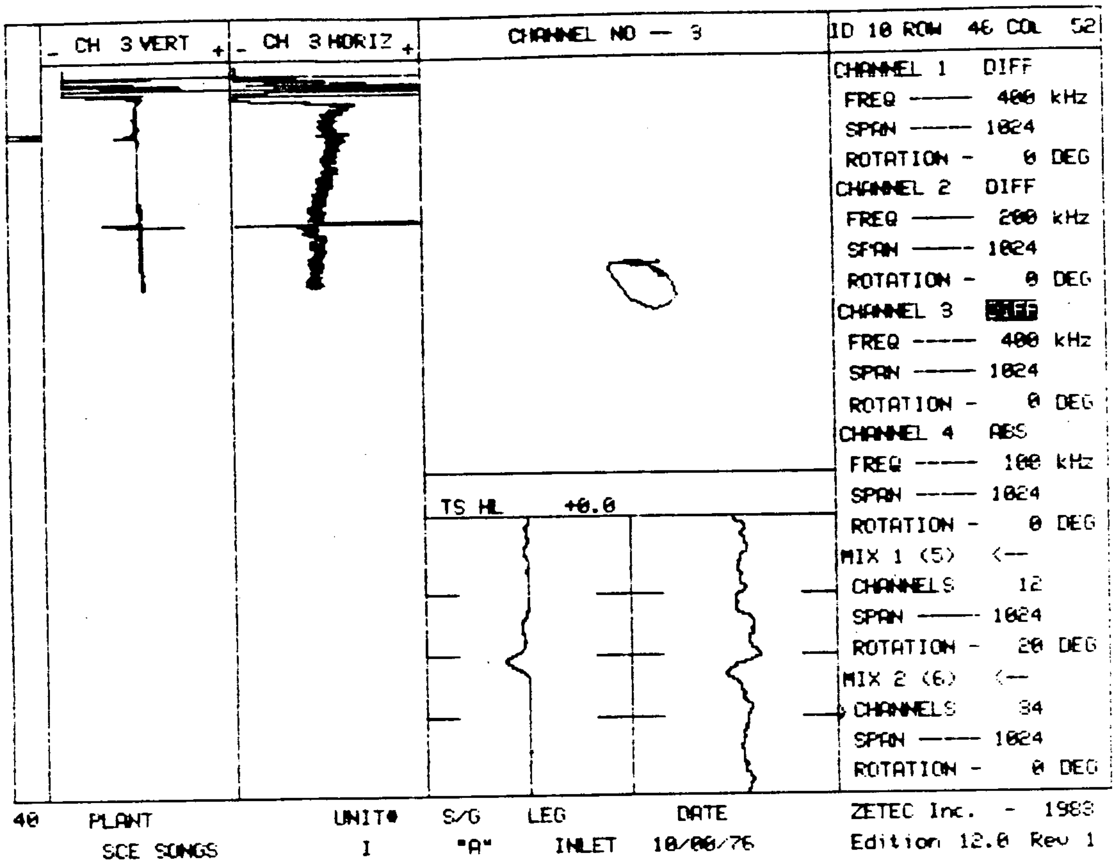
APPENDIX D

1976 COLUMN 52

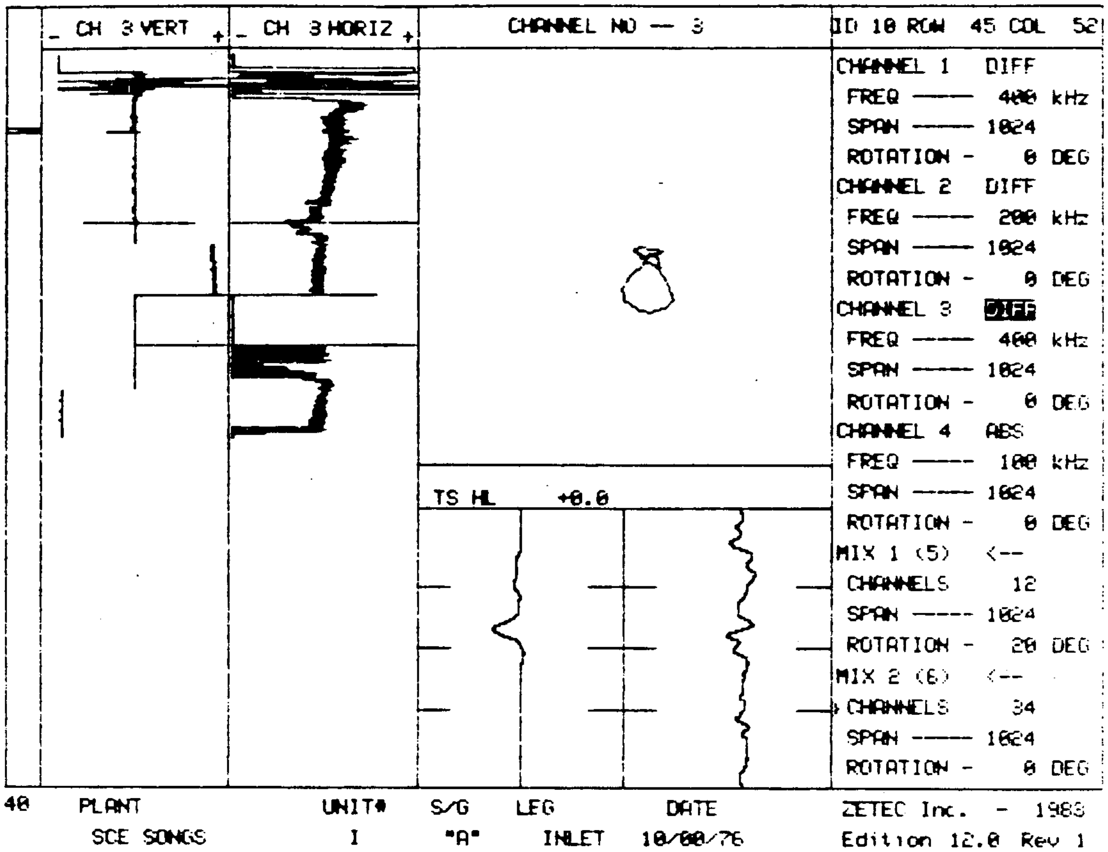

_ CH 3 VERT +
_ CH 3 HORIZ +
CHANNEL NO — 3
ID 10 ROW 48 COL 52
CHANNEL 1 DIFF
FREQ ——— 400 kHz
SPAN ——— 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ——— 200 kHz
SPAN ——— 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ——— 400 kHz
SPAN ——— 1024
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ——— 100 kHz
SPAN ——— 1024
ROTATION - 0 DEG
MIX 1 (5) <—
CHANNELS 12
SPAN ——— 1024
ROTATION - 20 DEG
MIX 2 (6) <—
CHANNELS 34
SPAN ——— 1024
ROTATION - 0 DEG
TS HL +0.0
40 PLANT UNIT# S/G LEG DATE
SCE SONGS I "A" INLET 10/00/76
ZETEC Inc. - 1983
Edition 12.0 Rev 1



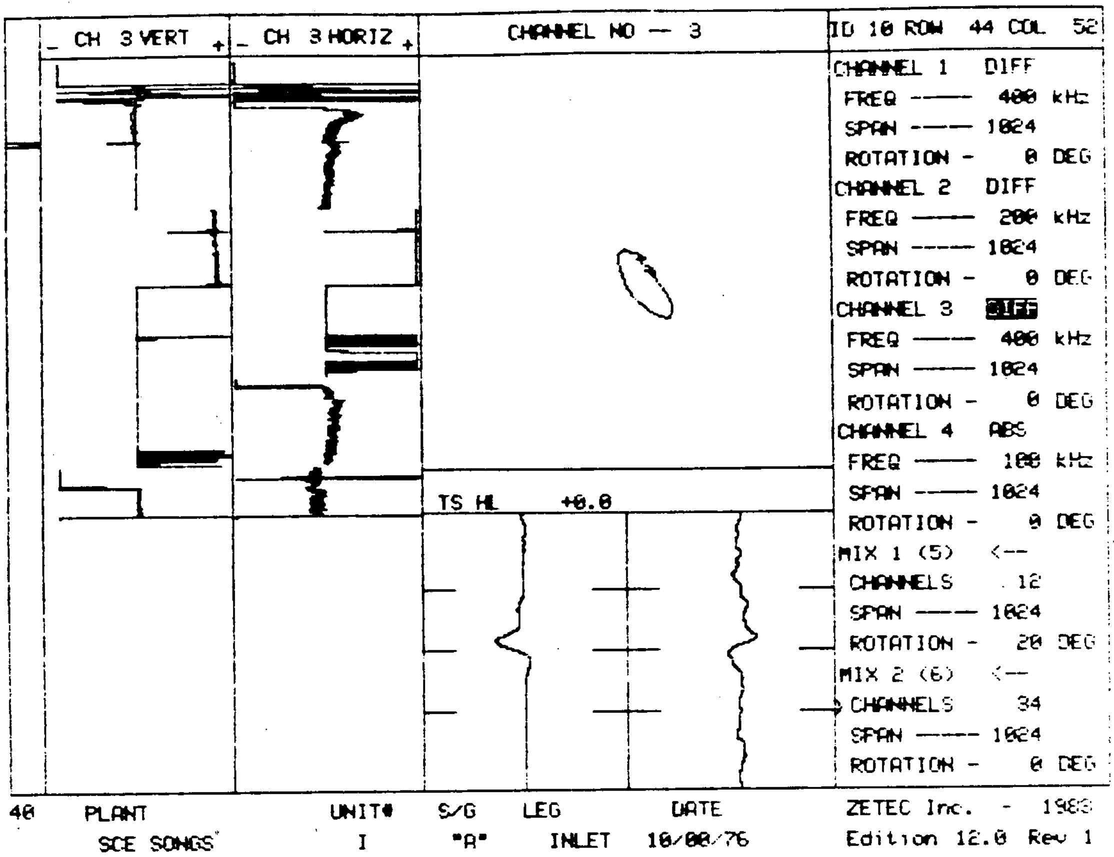
CH 3 VERT
CH 3 HORIZ
CHANNEL NO -- 3
ID 10 ROW 47 COL 52
CHANNEL 1 DIFF
FREQ ---- 400 kHz
SPAN ---- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ---- 200 kHz
SPAN ---- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ---- 400 kHz
SPAN ---- 1024
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ---- 100 kHz
SPAN ---- 1024
ROTATION - 0 DEG
MIX 1 (5) <—
CHANNELS 12
SPAN ---- 1024
ROTATION - 20 DEG
MIX 2 (6) <—
CHANNELS 34
SPAN ---- 1024
ROTATION - 0 DEG
TS HL +0.0
40 PLANT UNIT# S/G LEG DATE
SCE SONGS I "A" INLET 10/00/76
ZETEC Inc. - 1983
Edition 12.0 Rev 1



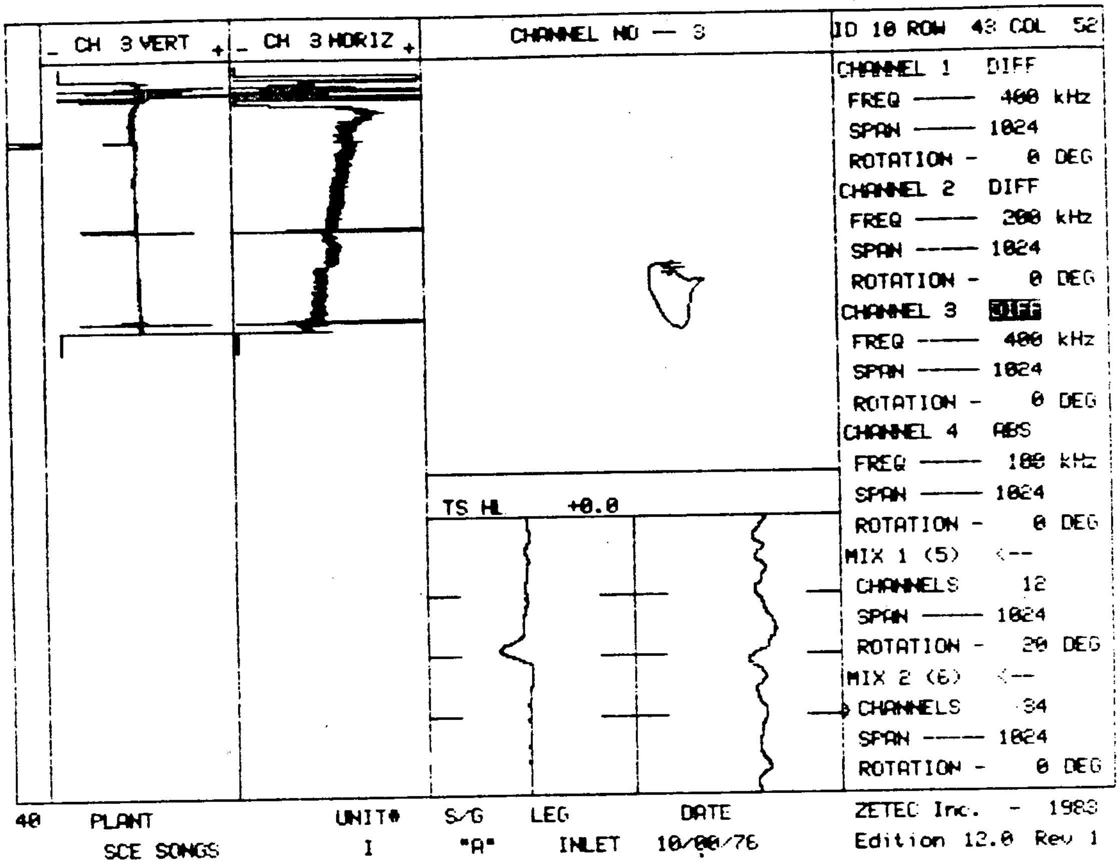
CH 3 VERT
CH 3 HORIZ
CHANNEL NO — 3
ID 10 ROW 46 COL 52
CHANNEL 1 DIFF
FREQ —— 400 kHz
SPAN —— 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ —— 200 kHz
SPAN —— 1024
ROTATION - 0 DEG
CHANNEL 3
FREQ —— 400 kHz
SPAN —— 1024
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ —— 100 kHz
SPAN —— 1024
ROTATION - 0 DEG
MIX 1 (5) <—
CHANNELS 12
SPAN —— 1024
ROTATION - 20 DEG
MIX 2 (6) <—
CHANNELS 34
SPAN —— 1024
ROTATION - 0 DEG
TS HL +0.0
40 PLANT UNIT# S/G LEG DATE
SCE SONGS I "A" INLET 10/00/76
ZETEC Inc. - 1983
Edition 12.0 Rev 1

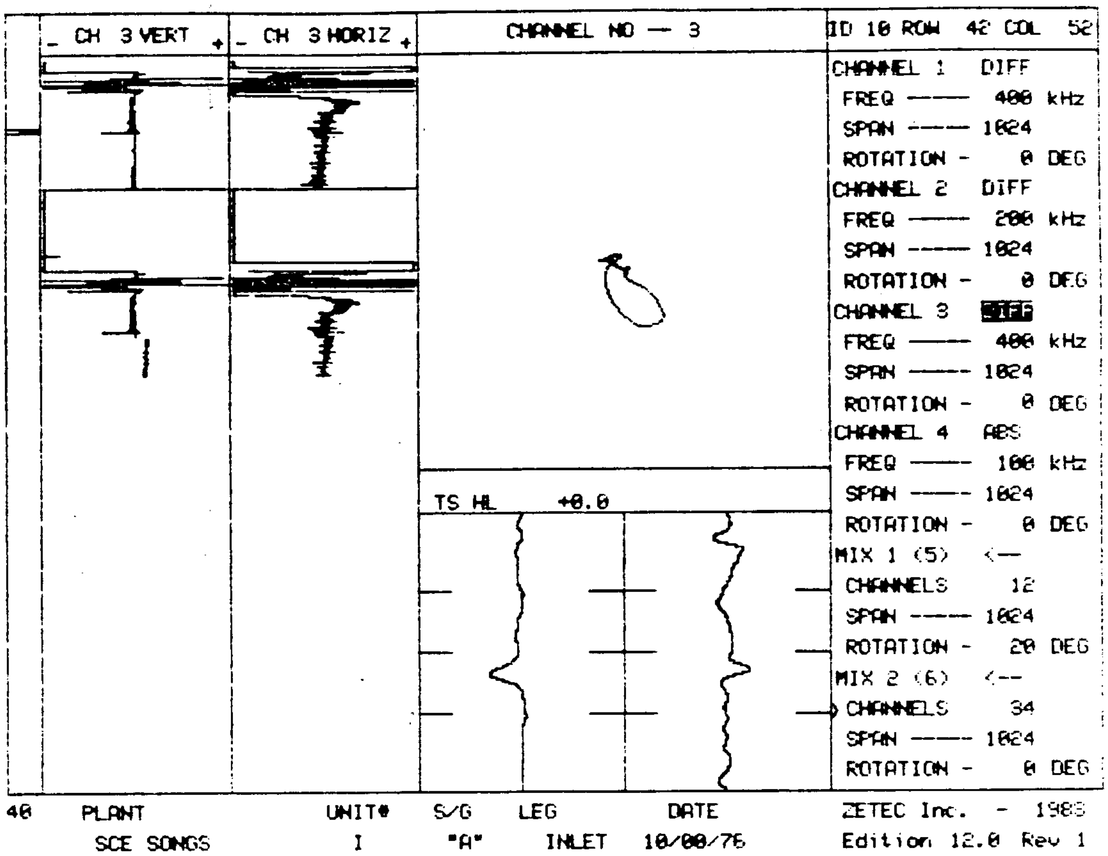


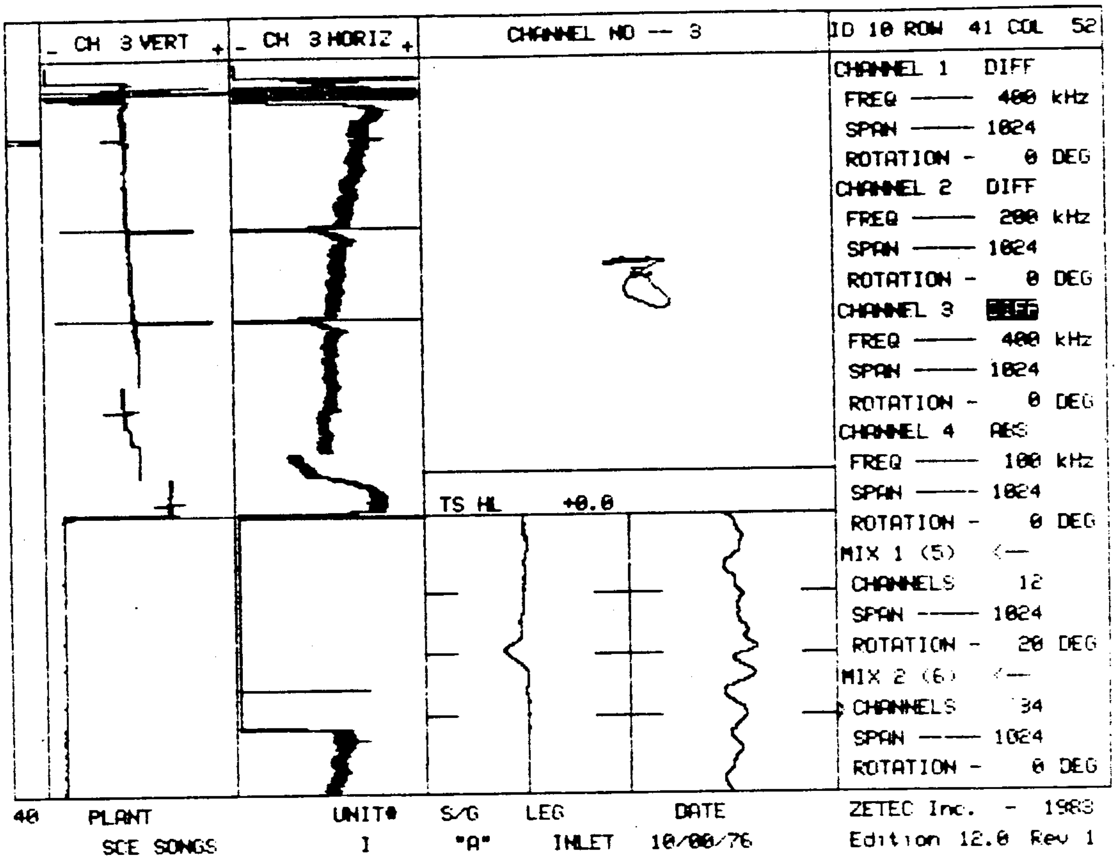
_ CH 3 VERT +
_ CH 3 HORIZ +
CHANNEL NO — 3
ID 10 ROW 45 COL 52
CHANNEL 1 DIFF
FREQ ——— 400 kHz
SPAN ——— 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ——— 200 kHz
SPAN ——— 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ——— 400 kHz
SPAN ——— 1024
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ——— 100 kHz
SPAN ——— 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 12
SPAN ——— 1024
ROTATION - 20 DEG
MIX 2 (6) <--
CHANNELS 34
SPAN ——— 1024
ROTATION - 0 DEG
TS HL +0.0
40
PLANT
SCE SONGS
UNIT#
I
S/G
"A"
LEG
INLET
DATE
10/00/76
ZETEC Inc. - 1983
Edition 12.0 Rev 1

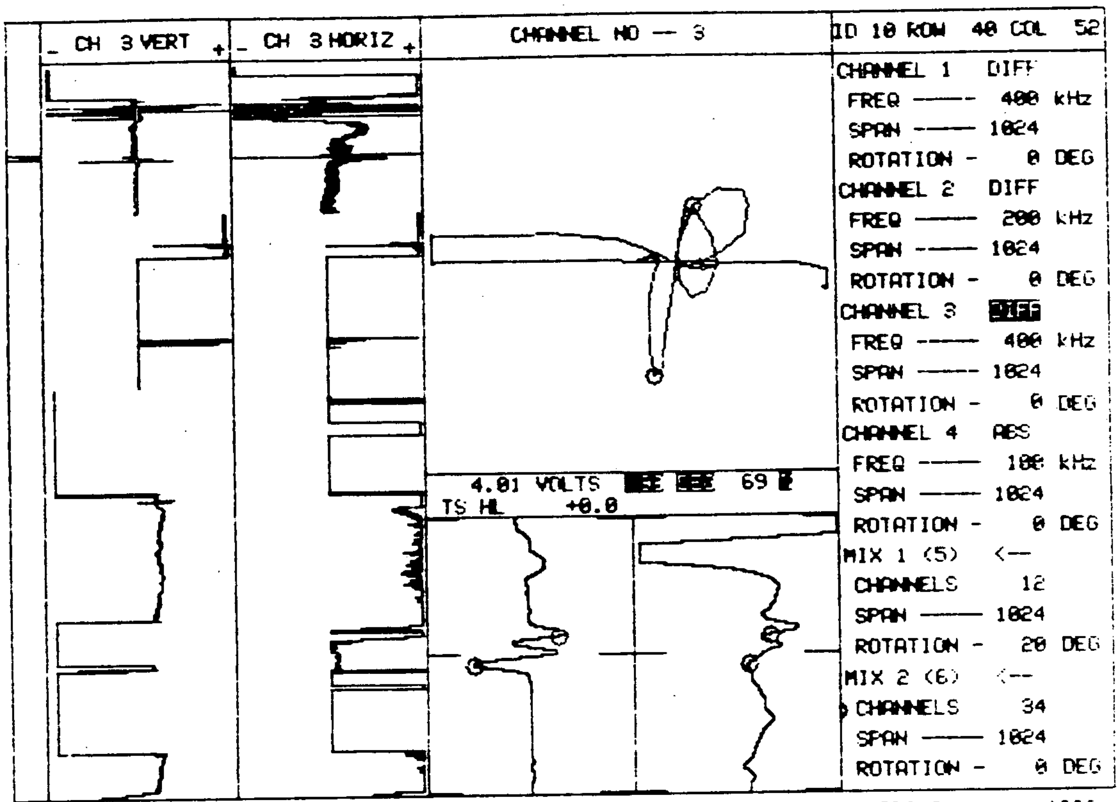


CH 3 VERT
CH 3 HORIZ
CHANNEL NO — 3
ID 10 ROW 44 COL 52
CHANNEL 1 DIFF
FREQ —— 400 kHz
SPAN —— 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ —— 200 kHz
SPAN —— 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ —— 400 kHz
SPAN —— 1024
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ —— 100 kHz
SPAN —— 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 12
SPAN —— 1024
ROTATION - 20 DEG
MIX 2 (6) <--
CHANNELS 34
SPAN —— 1024
ROTATION - 0 DEG
TS HL +0.0
40 PLANT UNIT# S/G LEG DATE
SCE SONGS I "A" INLET 10/00/76
ZETEC Inc. - 1983
Edition 12.0 Rev 1


CH 3 VERT
CH 3 HORIZ
CHANNEL NO — 3
ID 10 ROW 43 COL 52
CHANNEL 1 DIFF
FREQ —— 400 kHz
SPAN —— 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ —— 200 kHz
SPAN —— 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ —— 400 kHz
SPAN —— 1024
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ —— 100 kHz
SPAN —— 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 12
SPAN —— 1024
ROTATION - 20 DEG
MIX 2 (6) <--
CHANNELS 34
SPAN —— 1024
ROTATION - 0 DEG
TS HL +0.0
40 PLANT UNIT# S/G LEG DATE
SCE SONGS I "A" INLET 10/00/76
ZETEC Inc. - 1983
Edition 12.0 Rev 1

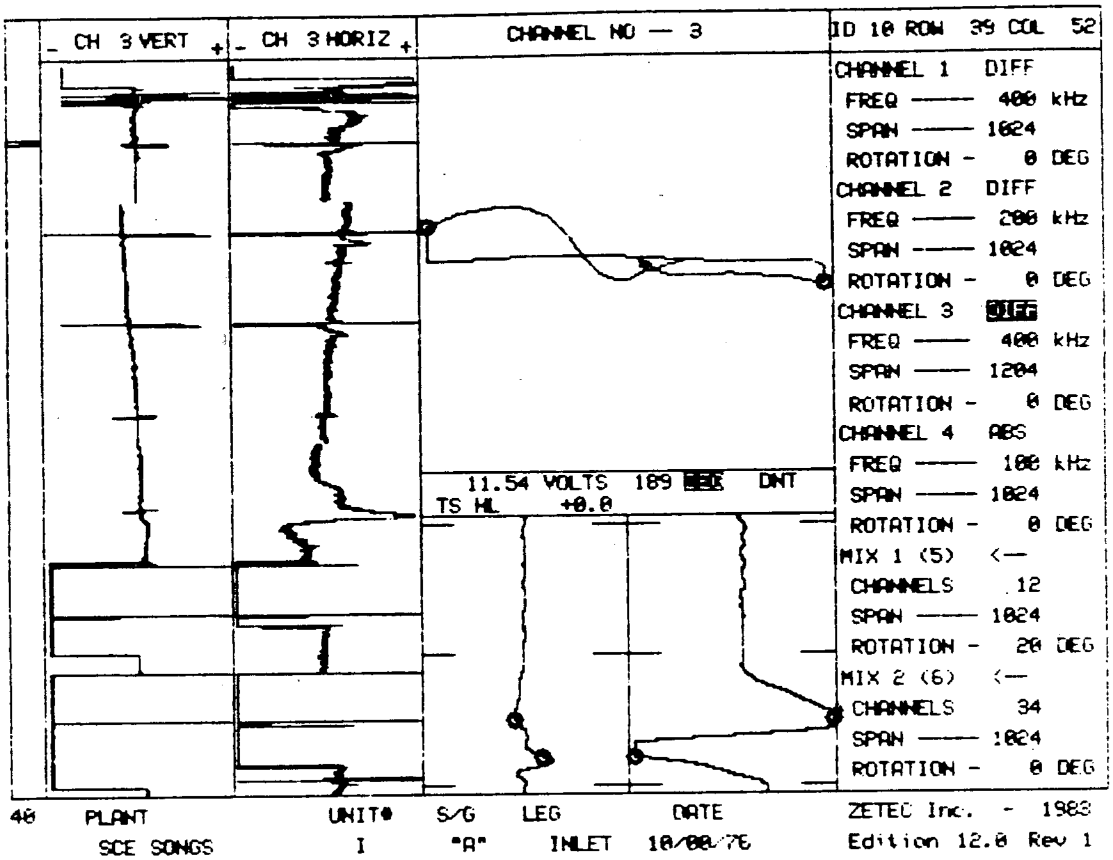

_ CH 3 VERT +
_ CH 3 HORIZ +
CHANNEL NO — 3
ID 10 ROW 42 COL 52
CHANNEL 1 DIFF
FREQ ——— 400 kHz
SPAN ——— 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ——— 200 kHz
SPAN ——— 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ——— 400 kHz
SPAN ——— 1024
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ——— 100 kHz
SPAN ——— 1024
ROTATION - 0 DEG
MIX 1 (5) <—
CHANNELS 12
SPAN ——— 1024
ROTATION - 20 DEG
MIX 2 (6) <—
CHANNELS 34
SPAN ——— 1024
ROTATION - 0 DEG
TS HL +0.0
40 PLANT UNIT# S/G LEG DATE
SCE SONGS I "A" INLET 10/00/76
ZETEC Inc. - 1983
Edition 12.0 Rev 1


CH 3 VERT
CH 3 HORIZ
CHANNEL NO -- 3
ID 10 ROW 41 COL 52
CHANNEL 1 DIFF
FREQ —— 400 kHz
SPAN —— 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ —— 200 kHz
SPAN —— 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ —— 400 kHz
SPAN —— 1024
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ —— 100 kHz
SPAN —— 1024
ROTATION - 0 DEG
MIX 1 (5)
CHANNELS 12
SPAN —— 1024
ROTATION - 20 DEG
MIX 2 (6)
CHANNELS 34
SPAN —— 1024
ROTATION - 0 DEG
TS HL +0.0
40 PLANT UNIT# S/G LEG DATE
SCE SONGS I "A" INLET 10/00/76
ZETEC Inc. - 1983
Edition 12.0 Rev 1

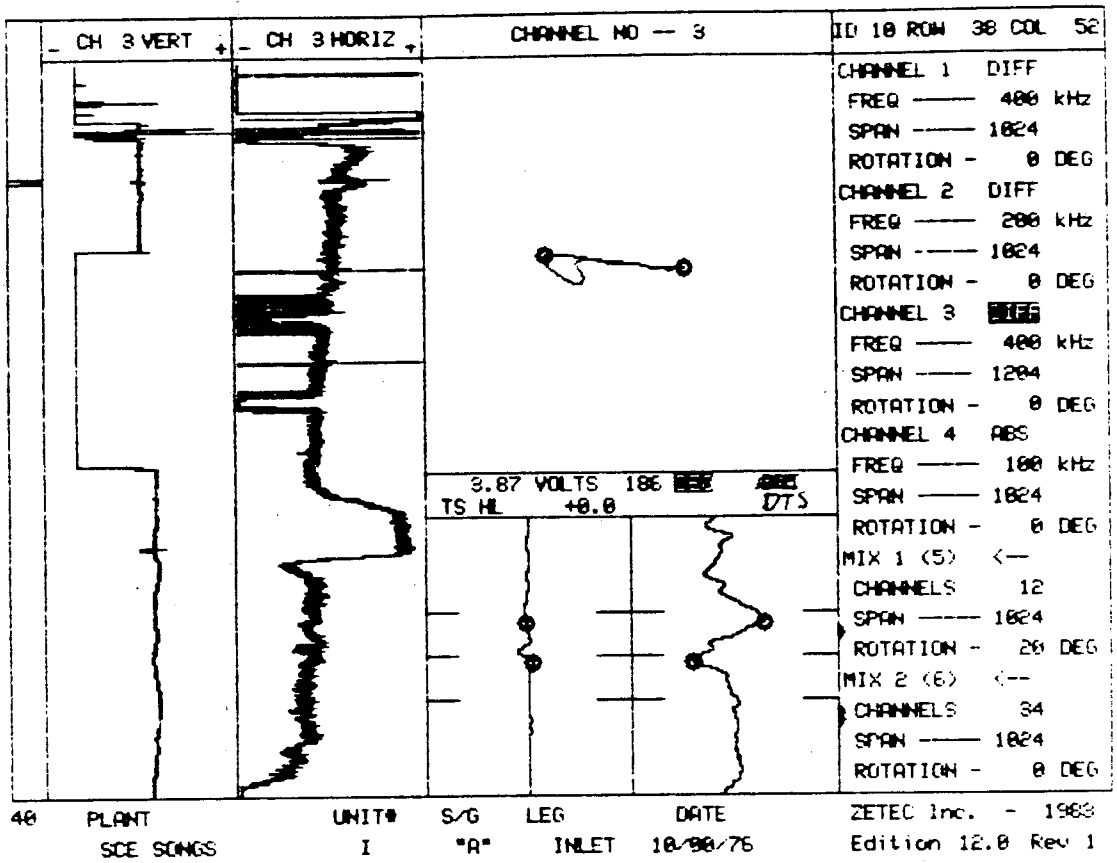


40

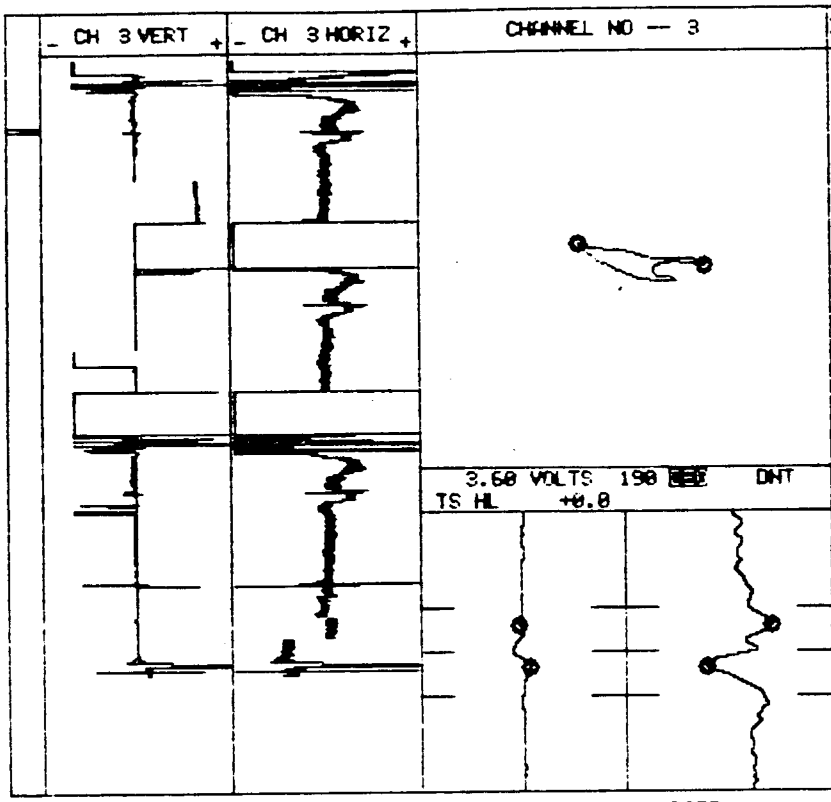
ZETEC Inc. - 1983
Edition 12.0 Rev 1



CH 3 VERT
CH 3 HORIZ
CHANNEL NO — 3
ID 10 ROW 39 COL 52
CHANNEL 1 DIFF
FREQ —— 400 kHz
SPAN —— 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ —— 200 kHz
SPAN —— 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ —— 400 kHz
SPAN —— 1204
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ —— 100 kHz
SPAN —— 1024
ROTATION - 0 DEG
MIX 1 (5) <—
CHANNELS 12
SPAN —— 1024
ROTATION - 20 DEG
MIX 2 (6) <—
CHANNELS 34
SPAN —— 1024
ROTATION - 0 DEG
11.54 VOLTS 189 DEG DNT
TS HL +0.0
40 PLANT UNIT# S/G LEG DATE
SCE SONGS I "A" INLET 10/00/76
ZETEC Inc. - 1983
Edition 12.0 Rev 1



CH 3 VERT
CH 3 HORIZ
CHANNEL NO -- 3
ID 10 ROW 38 COL 52
CHANNEL 1 DIFF
FREQ ——— 400 kHz
SPAN ——— 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ——— 200 kHz
SPAN ——— 1024
ROTATION - 0 DEG
CHANNEL 3
FREQ ——— 400 kHz
SPAN ——— 1204
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ——— 100 kHz
SPAN ——— 1024
ROTATION - 0 DEG
MIX 1 (5) <—
CHANNELS 12
SPAN ——— 1024
ROTATION - 20 DEG
MIX 2 (6) <--
CHANNELS 34
SPAN ——— 1024
ROTATION - 0 DEG
3.87 VOLTS 186
TS HL +0.0
DTS
40
PLANT SCE SONGS
UNIT# I
S/G "A"
LEG INLET
DATE 10/00/76
ZETEC Inc. - 1983
Edition 12.0 Rev 1



ID 10 ROW 37 COL 52

CHANNEL 1 DIFF
FREQ —— 400 kHz
SPAN —— 1024
ROTATION - 0 DEG

CHANNEL 2 DIFF
FREQ —— 200 kHz
SPAN —— 1024
ROTATION - 0 DEG

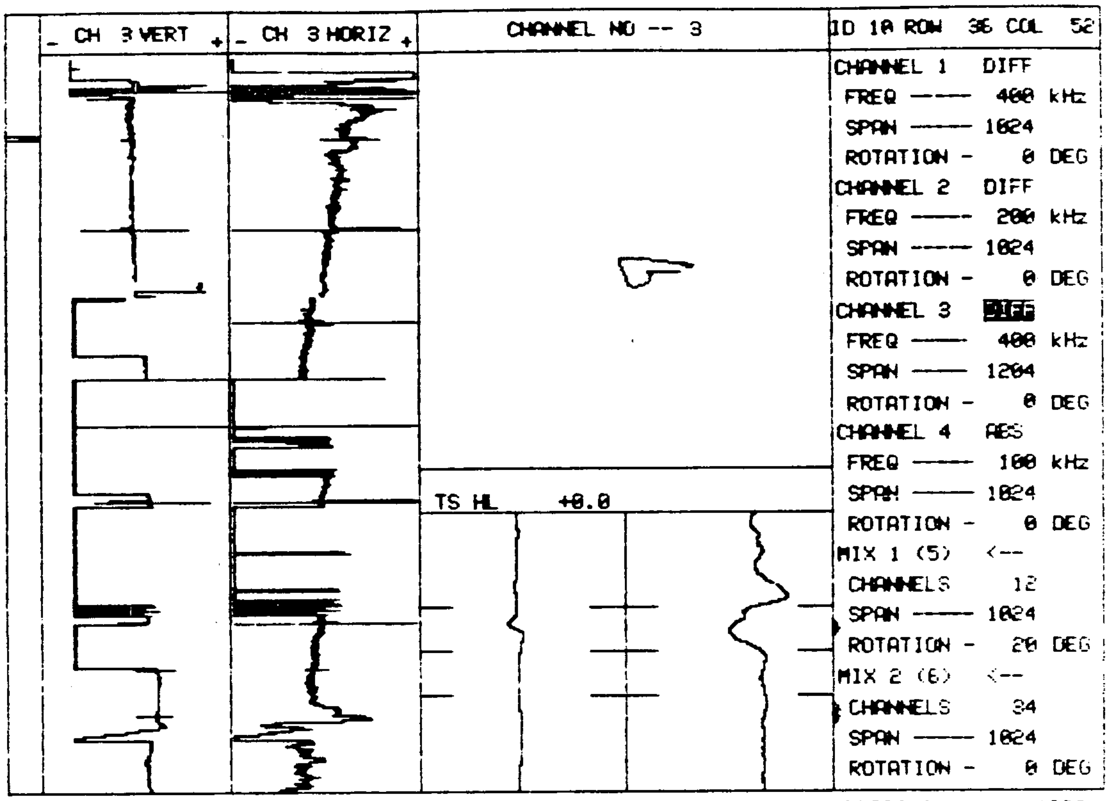
CHANNEL 3 DIFF
FREQ —— 400 kHz
SPAN —— 1204
ROTATION - 0 DEG

CHANNEL 4 ABS
FREQ —— 100 kHz
SPAN —— 1024
ROTATION - 0 DEG

MIX 1 (5) <—
CHANNELS 12
SPAN —— 1024
ROTATION - 20 DEG

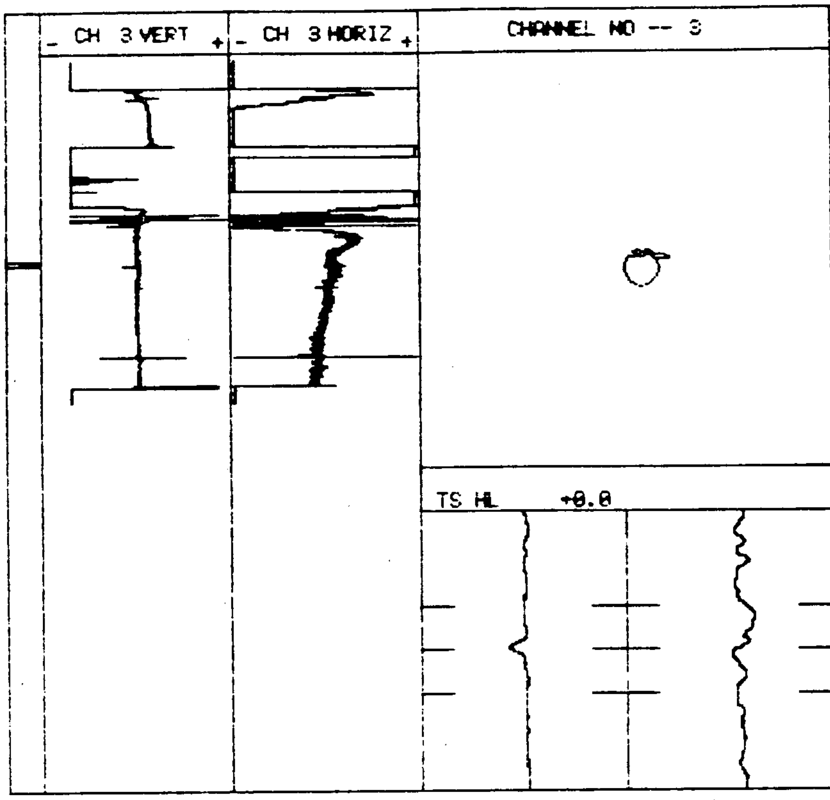
MIX 2 (6) <—
CHANNELS 34
SPAN —— 1024
ROTATION - 0 DEG

40	PLANT	UNIT#	S/G	LEG	DATE	ZETEC Inc. - 1983
	SCE SONGS	I	"A"	INLET	10/00/76	Edition 12.0 Rev 1



40 PLANT UNIT# S/G LEG DATE ZETEC Inc. - 1983

SCE SONGS I "A" INLET 10/08/76 Edition 12.0 Rev 1

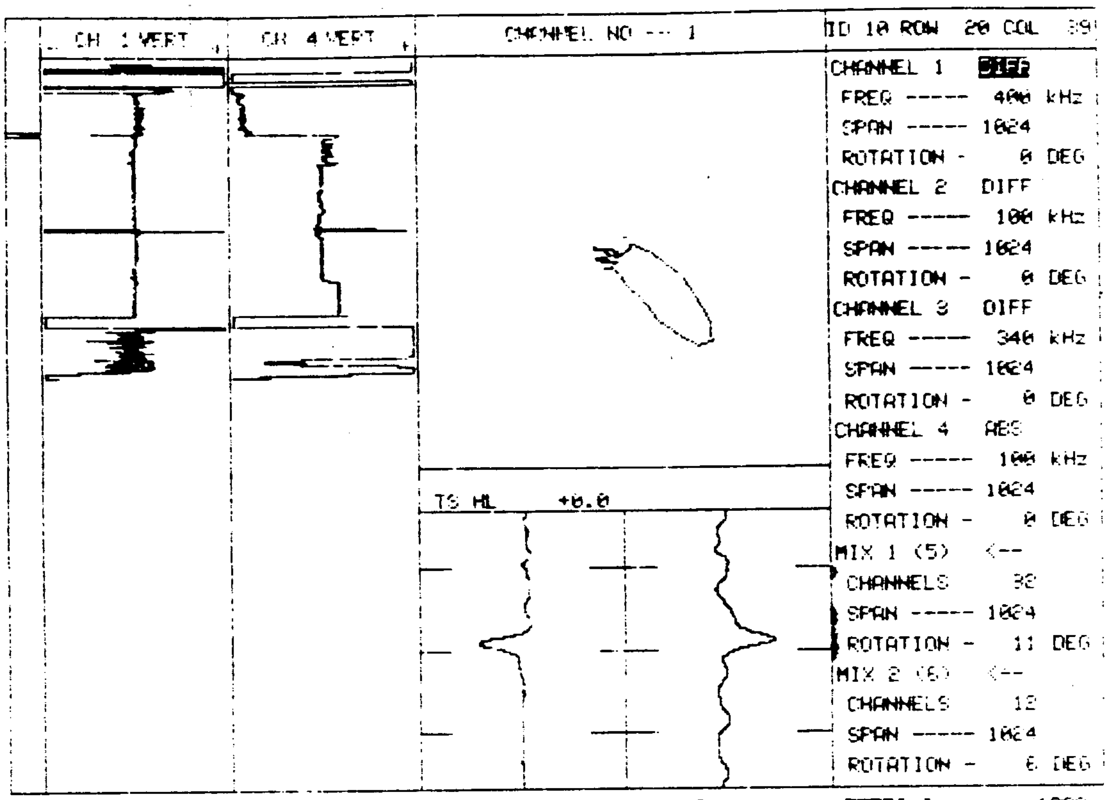


ID 10 ROW 34 COL 52

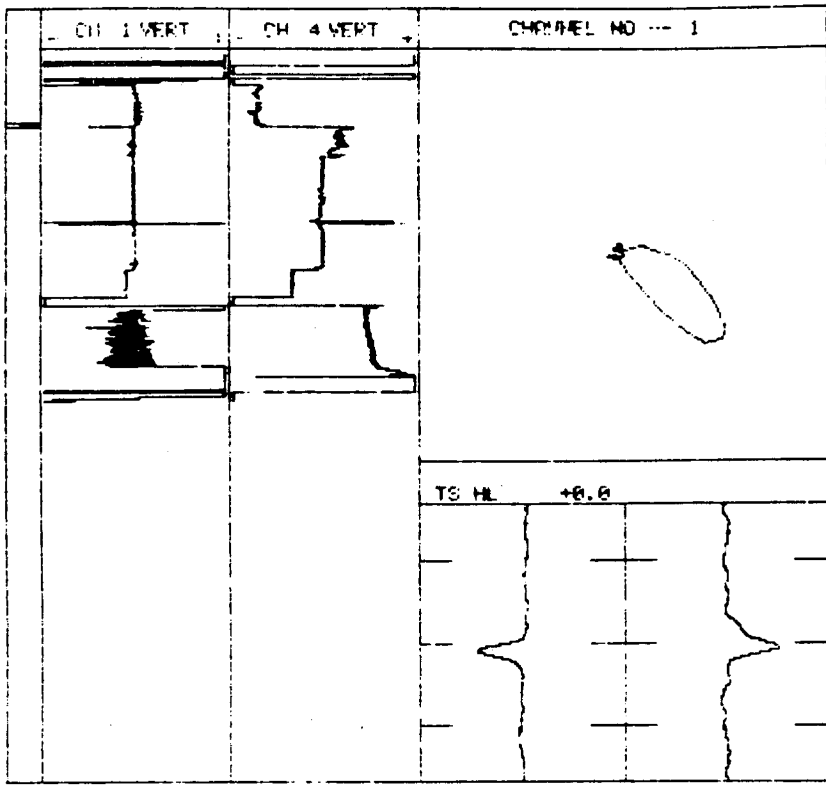
CHANNEL 1 DIFF
FREQ ——— 400 kHz
SPAN ——— 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ——— 200 kHz
SPAN ——— 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ——— 400 kHz
SPAN ——— 1204
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ——— 100 kHz
SPAN ——— 1024
ROTATION - 0 DEG
MIX 1 (5) <—
CHANNELS 12
SPAN ——— 1024
ROTATION - 20 DEG
MIX 2 (6) <—
CHANNELS 34
SPAN ——— 1024
ROTATION - 0 DEG

40	PLANT	UNIT#	S/G	LEG	DATE	ZETEC Inc. - 1983
	SCE SONGS	I	"A"	INLET	10/00/76	Edition 12.0 Rev 1

1980 COLUMN 39



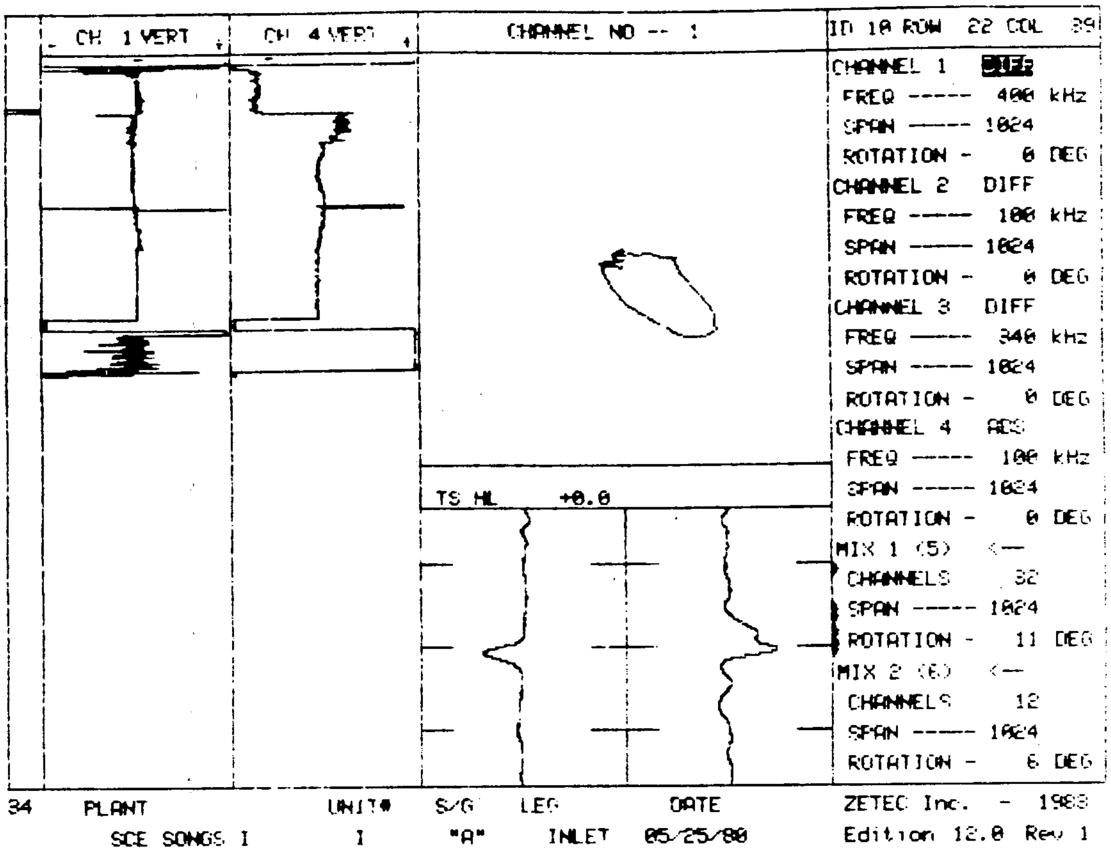
34	PLANT	UNIT#	S/G	LEG	DATE	ZETEC Inc. - 1983
	SCE SONGS I	I	"A"	INLET	05/25/90	Edition 12.0 Rev 1

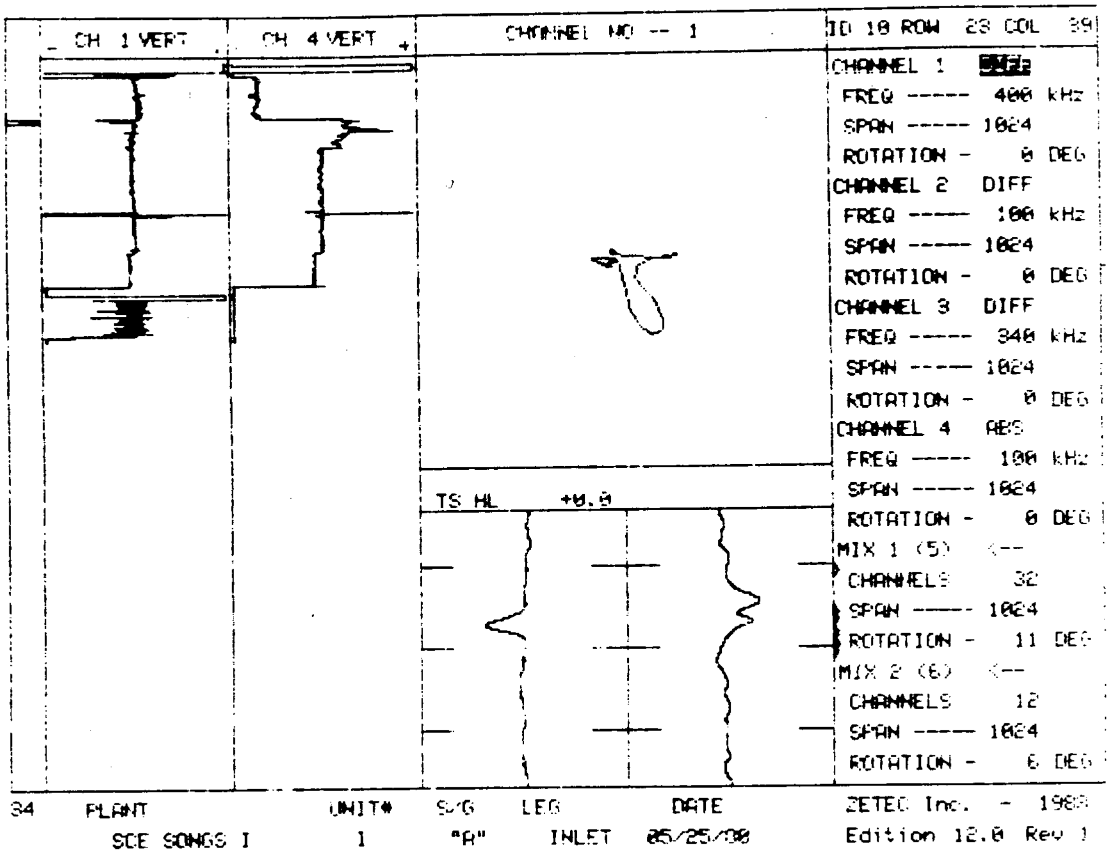


ID 10 ROW 21 COL 39

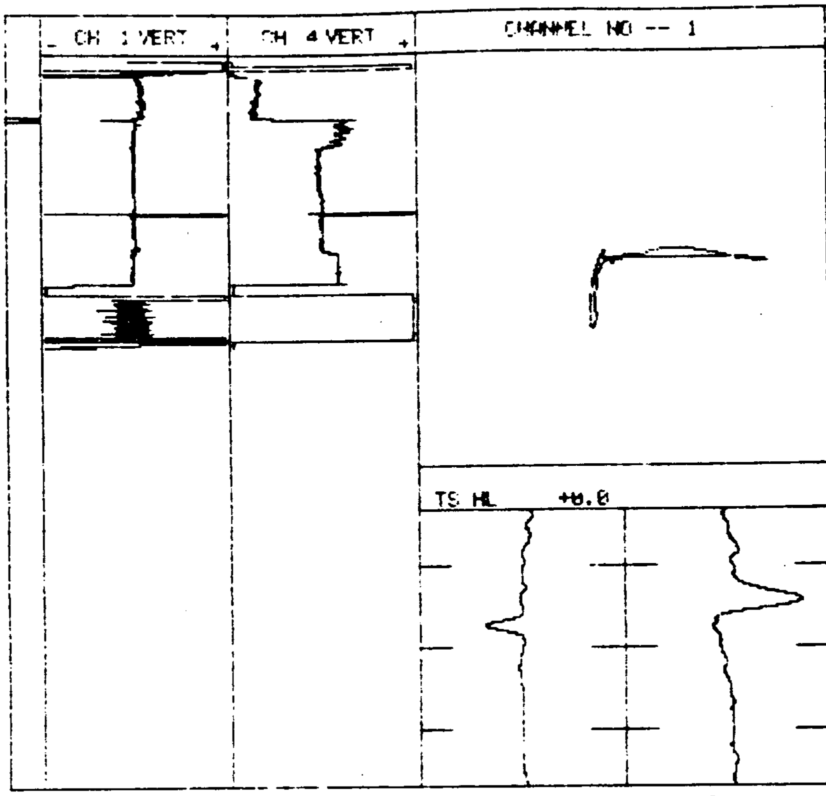
CHANNEL 1 DIFF
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 340 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 32
SPAN ----- 1024
ROTATION - 11 DEG
MIX 2 (6) <--
CHANNELS 12
SPAN ----- 1024
ROTATION - 6 DEG

34	PLANT	UNIT#	S/G	LEG	DATE	ZETEC Inc. - 1983
	SCE SONGS 1	1	"A"	INLET	05/25/80	Edition 12.0 Rev 1


CH 1 VERT
CH 4 VERT
CHANNEL NO -- 1
ID 10 ROW 22 COL 39
CHANNEL 1 DIFF
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 340 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 32
SPAN ----- 1024
ROTATION - 11 DEG
MIX 2 (6) <--
CHANNELS 12
SPAN ----- 1024
ROTATION - 6 DEG
TS HL +0.0
34 PLANT UNIT# S/G LEG DATE
SCE SONGS I I "A" INLET 05/25/80
ZETEC Inc. - 1983
Edition 12.0 Rev 1



CH 1 VERT
CH 4 VERT
CHANNEL NO -- 1
ID 18 ROW 23 COL 39
CHANNEL 1
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 340 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 32
SPAN ----- 1024
ROTATION - 11 DEG
MIX 2 (6) <--
CHANNELS 12
SPAN ----- 1024
ROTATION - 6 DEG
TS HL +0.0
34 PLANT UNIT# S/G LEG DATE
SCE SONGS I 1 "A" INLET 05/25/90
ZETEC Inc. - 1988
Edition 12.0 Rev 1

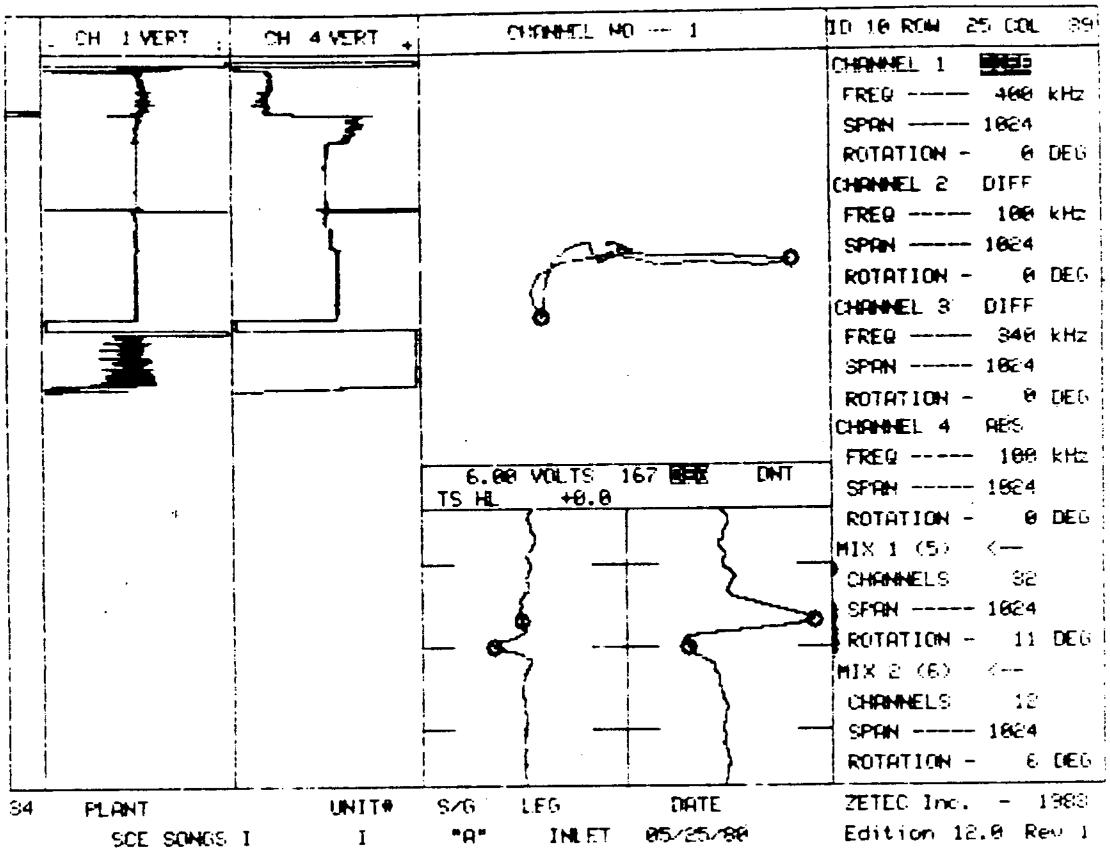


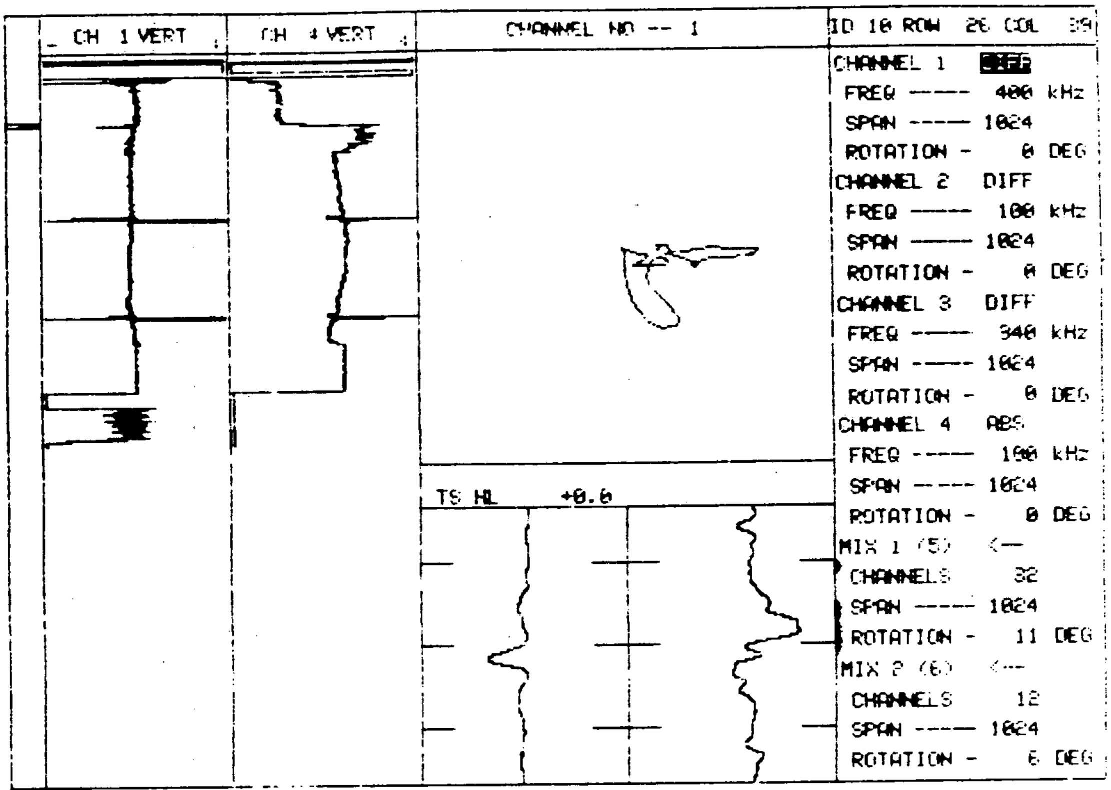
ID 10 ROW 24 COL 39

CHANNEL 1 [illegible]
FREQ ---- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 240 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 32
SPAN ----- 1024
ROTATION - 11 DEG
MIX 2 (6) <--
CHANNELS 12
SPAN ----- 1024
ROTATION - 6 DEG

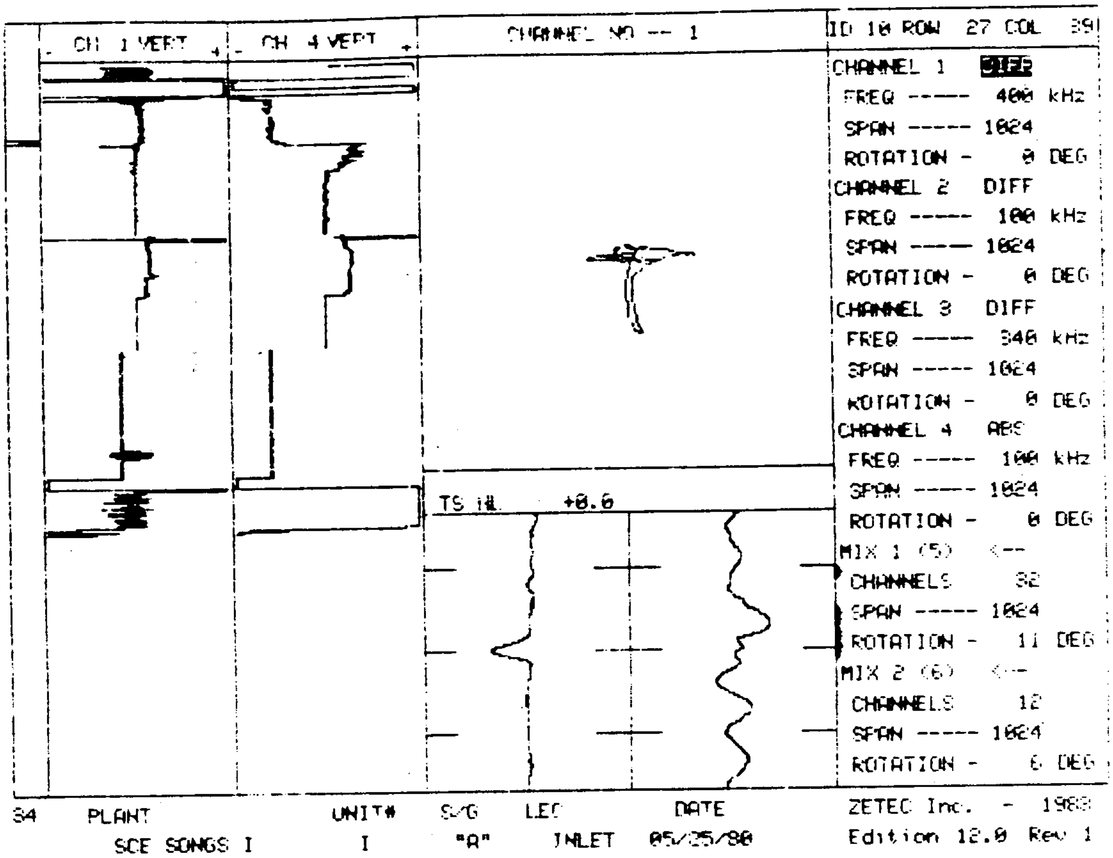
34	PLANT	UNIT#	S/G	LEG	DATE
	SCE SONGS I	I	"A"	INLET	05/25/88

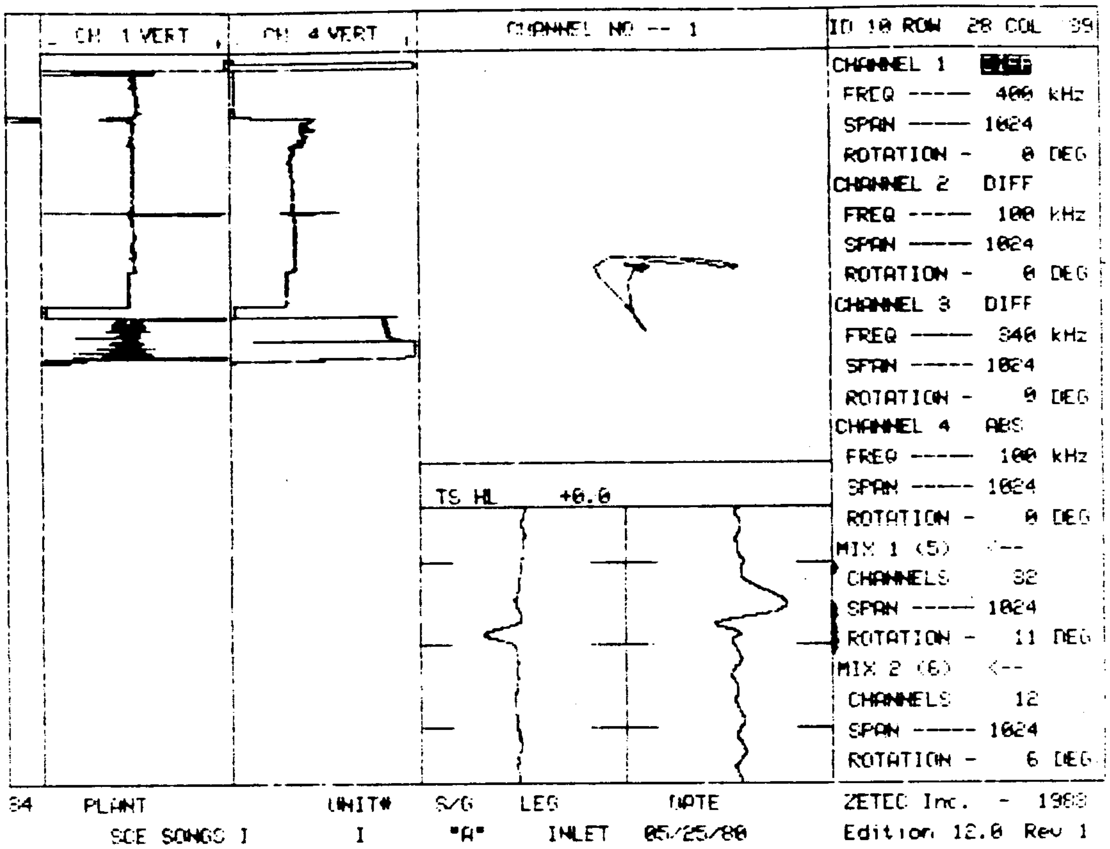
ZETEC Inc. - 1988
Edition 12.0 Rev 1


CH 1 VERT
CH 4 VERT
CHANNEL NO -- 1
ID 10 ROW 25 COL 39
CHANNEL 1
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 340 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 32
SPAN ----- 1024
ROTATION - 11 DEG
MIX 2 (6) <--
CHANNELS 12
SPAN ----- 1024
ROTATION - 6 DEG
6.00 VOLTS 167
DNT
TS HL +0.0
34
PLANT
SCE SONGS I
UNIT#
I
S/G
"A"
LEG
INLET
DATE
05/25/80
ZETEC Inc. - 1983
Edition 12.0 Rev 1

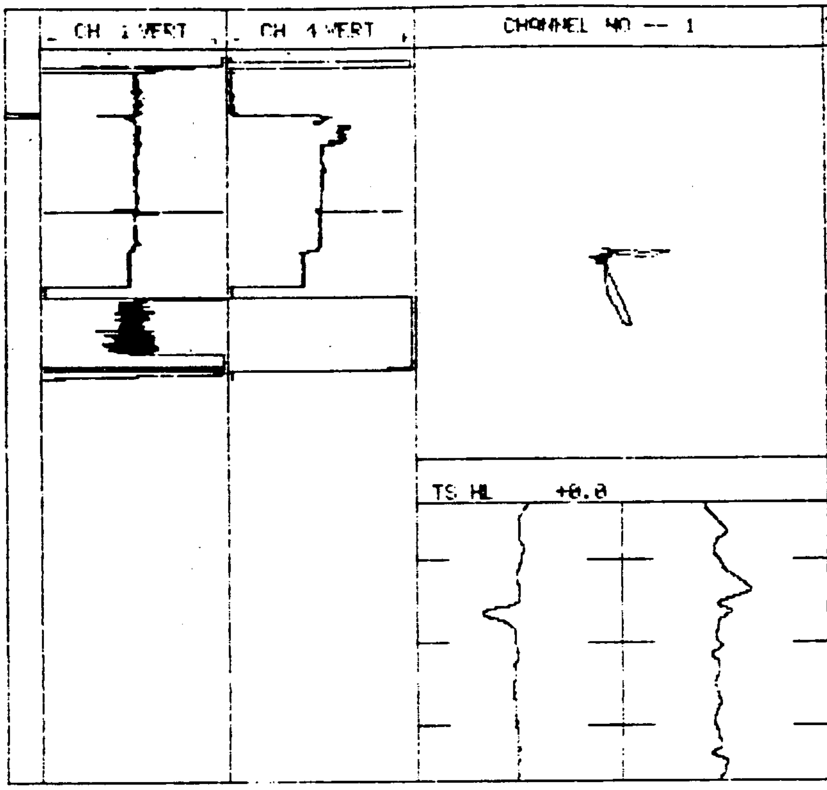


34	PLANT	UNIT#	S/G	LEG	DATE	ZETEC Inc. - 1988
	SCE SONGS I	I	"A"	INLET	05/25/88	Edition 12.0 Rev 1


CH 1 VERT
CH 4 VERT
CHANNEL NO -- 1
ID 10 ROW 27 COL 39
CHANNEL 1 DIFF
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 340 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 32
SPAN ----- 1024
ROTATION - 11 DEG
MIX 2 (6) <--
CHANNELS 12
SPAN ----- 1024
ROTATION - 6 DEG
TS HL +0.6
34 PLANT UNIT# S/G LEG DATE
SCE SONGS I I "A" INLET 05/25/88
ZETEC Inc. - 1983
Edition 12.0 Rev 1



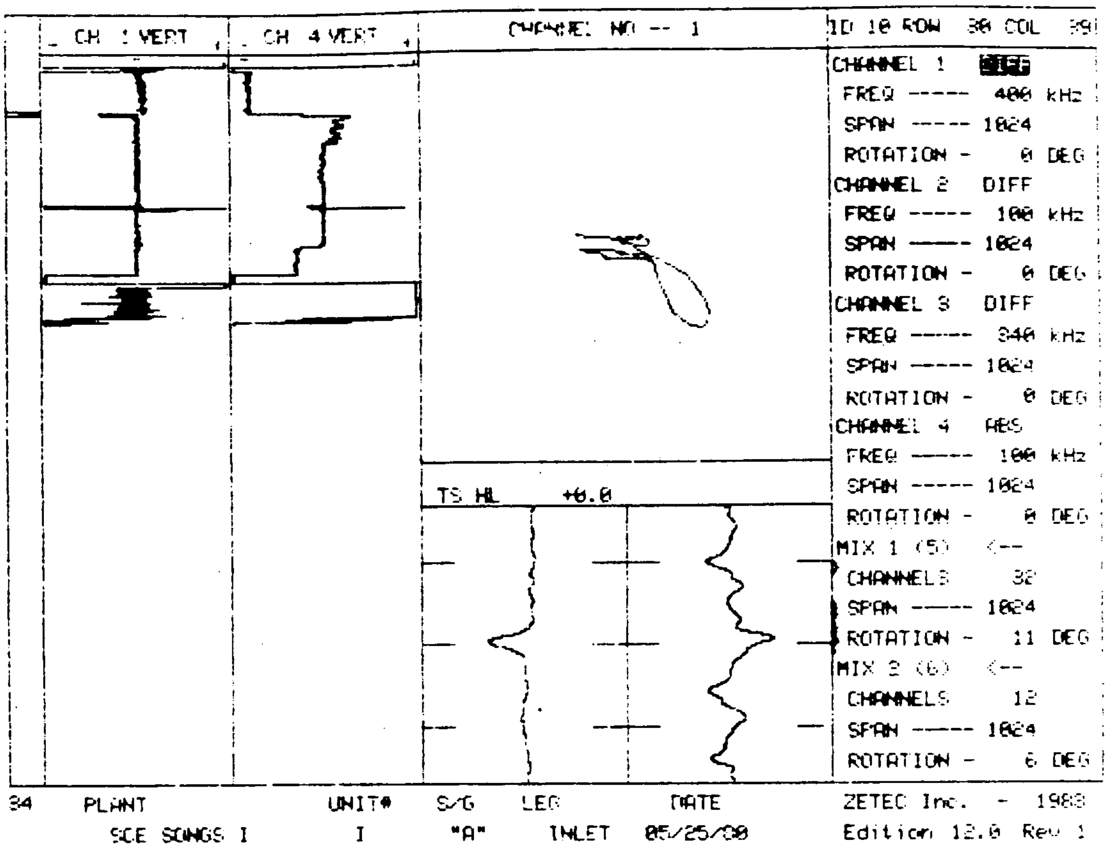
CH 1 VERT
CH 4 VERT
CHANNEL NO -- 1
ID 10 ROW 28 COL 39
CHANNEL 1
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 340 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
TS HL +0.0
MIX 1 (5) <--
CHANNELS 32
SPAN ----- 1024
ROTATION - 11 DEG
MIX 2 (6) <--
CHANNELS 12
SPAN ----- 1024
ROTATION - 6 DEG
34 PLANT UNIT# S/G LEG DATE
SCE SONGS I I "A" INLET 05/25/88
ZETEC Inc. - 1988
Edition 12.0 Rev 1



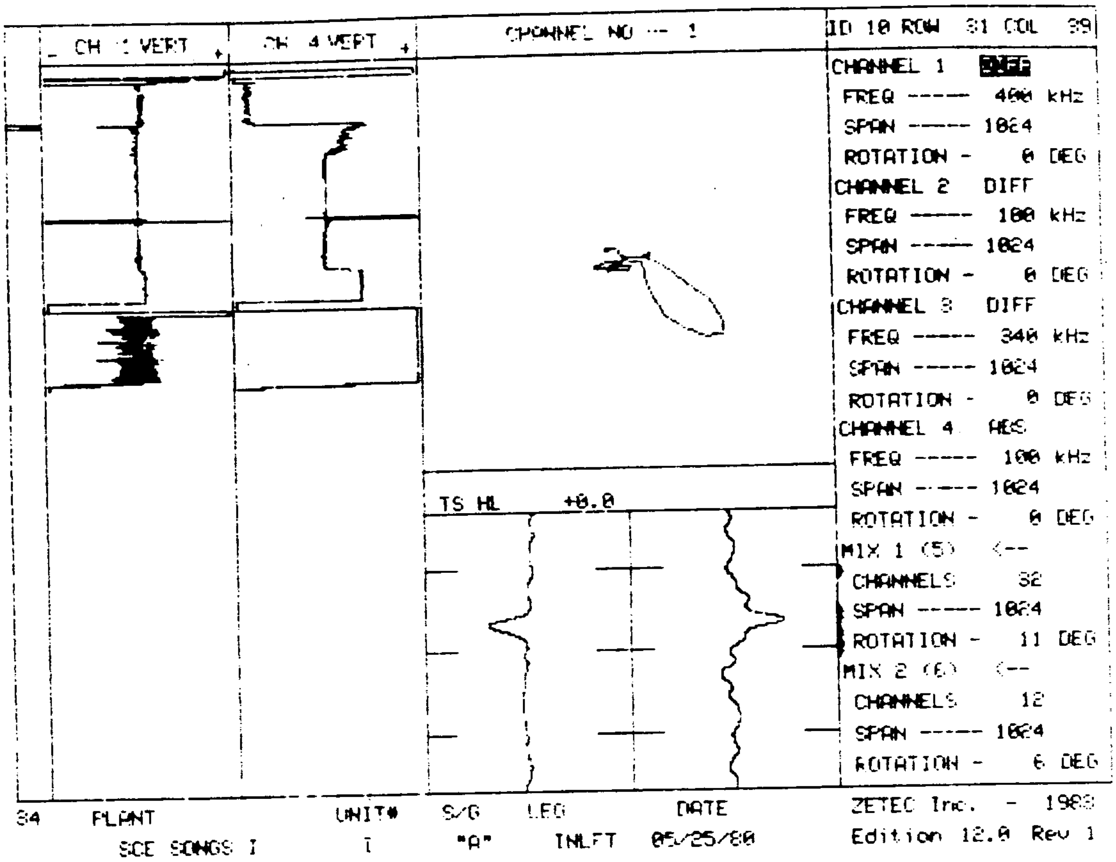
ID 10 ROW 29 COL 29

CHANNEL 1 [illegible]
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 340 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 32
SPAN ----- 1024
ROTATION - 11 DEG
MIX 2 (6) <--
CHANNELS 12
SPAN ----- 1024
ROTATION - 6 DEG

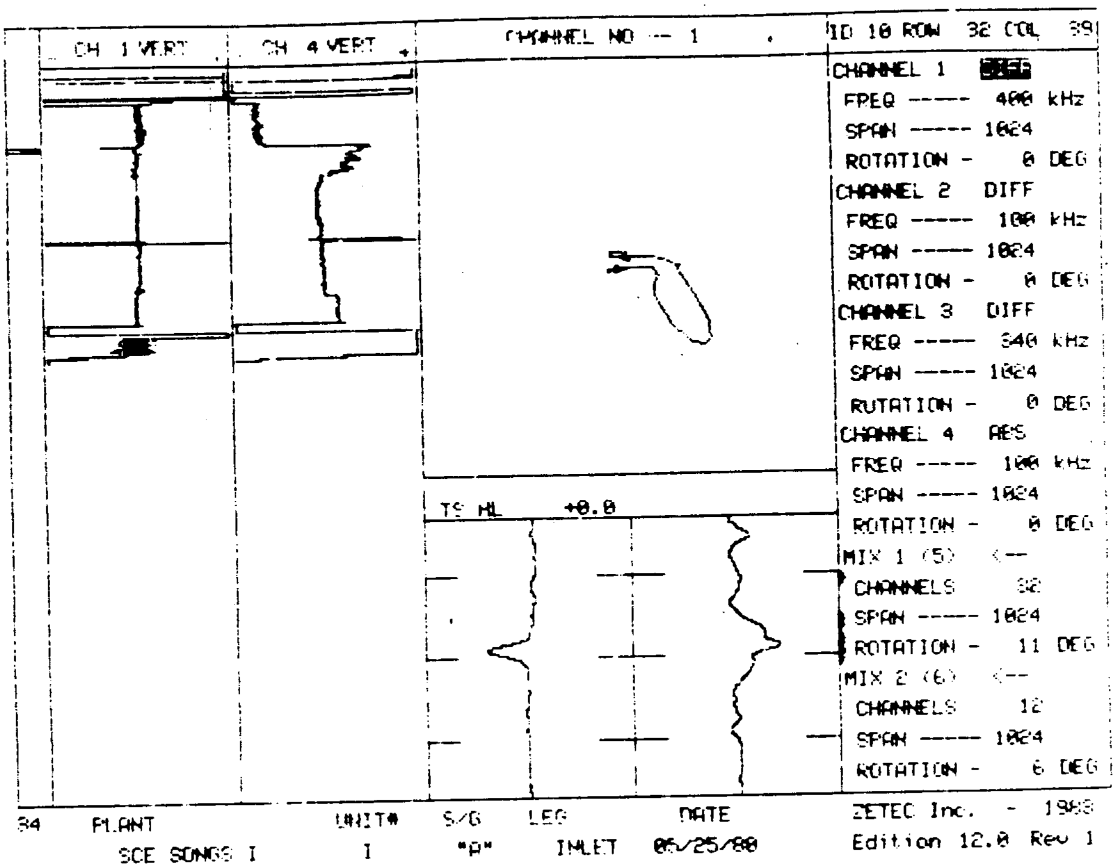
34	PLANT	UNIT#	S/G	LEG	DATE	ZETEC Inc. - 1983
	SCE SONGS I	1	"A"	INLET	05/25/80	Edition 12.0 Rev 1



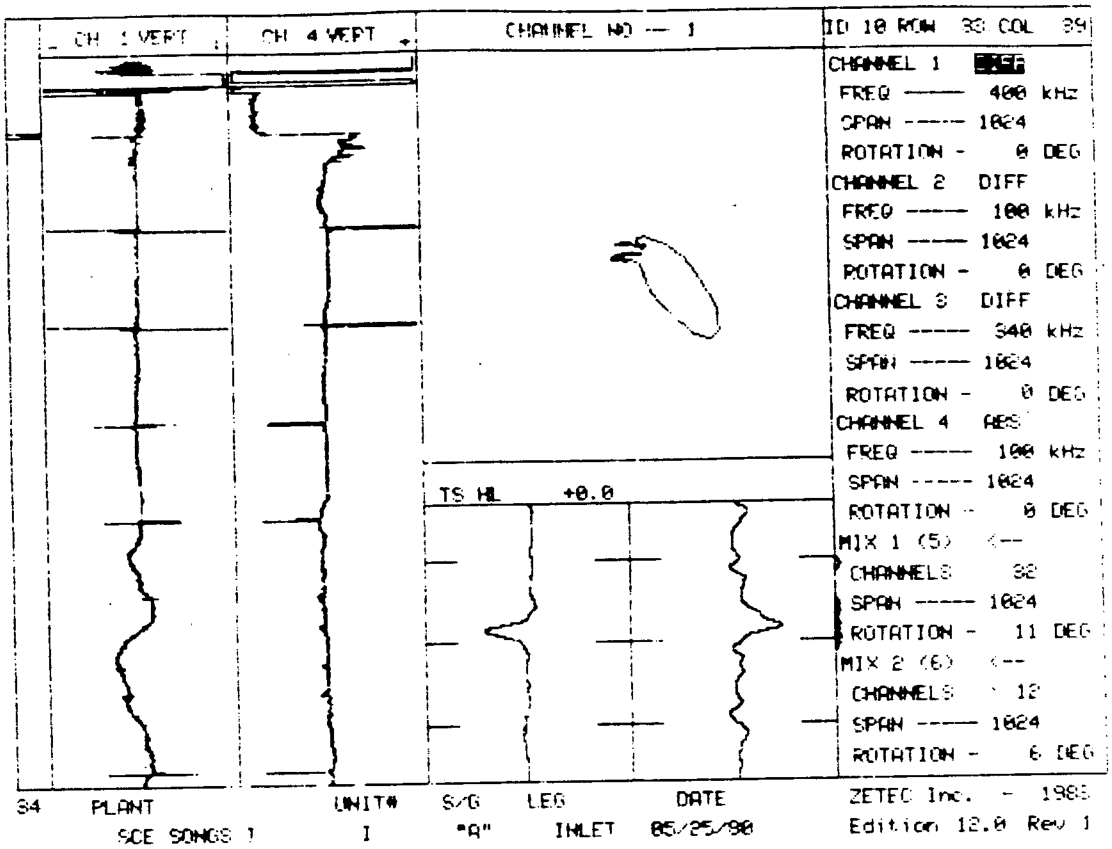
CH 1 VERT
CH 4 VERT
CHANNEL NO -- 1
ID 10 ROW 38 COL 89
CHANNEL 1 DIFF
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 340 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 32
SPAN ----- 1024
ROTATION - 11 DEG
MIX 2 (6) <--
CHANNELS 12
SPAN ----- 1024
ROTATION - 6 DEG
TS HL +0.0
34 PLANT UNIT# S/G LEG DATE
SCE SONGS I I "A" INLET 05/25/80
ZETEC Inc. - 1983
Edition 12.0 Rev 1

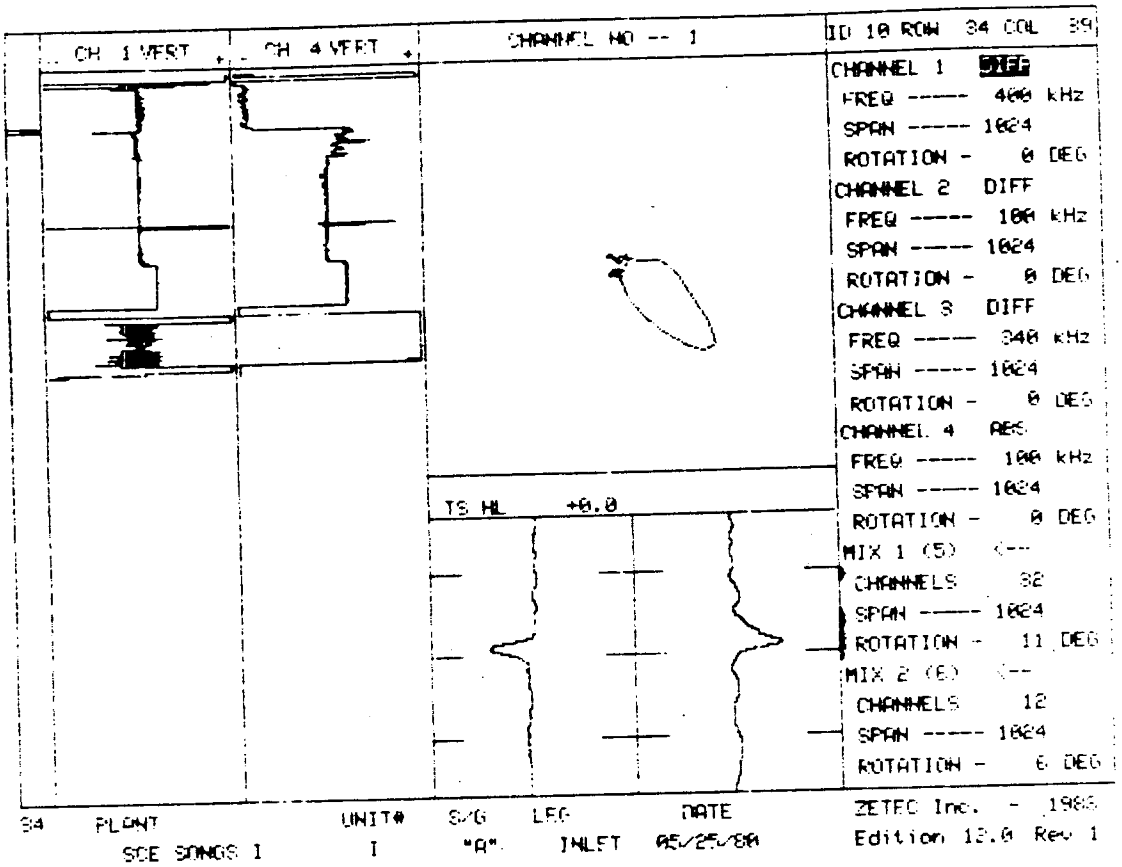


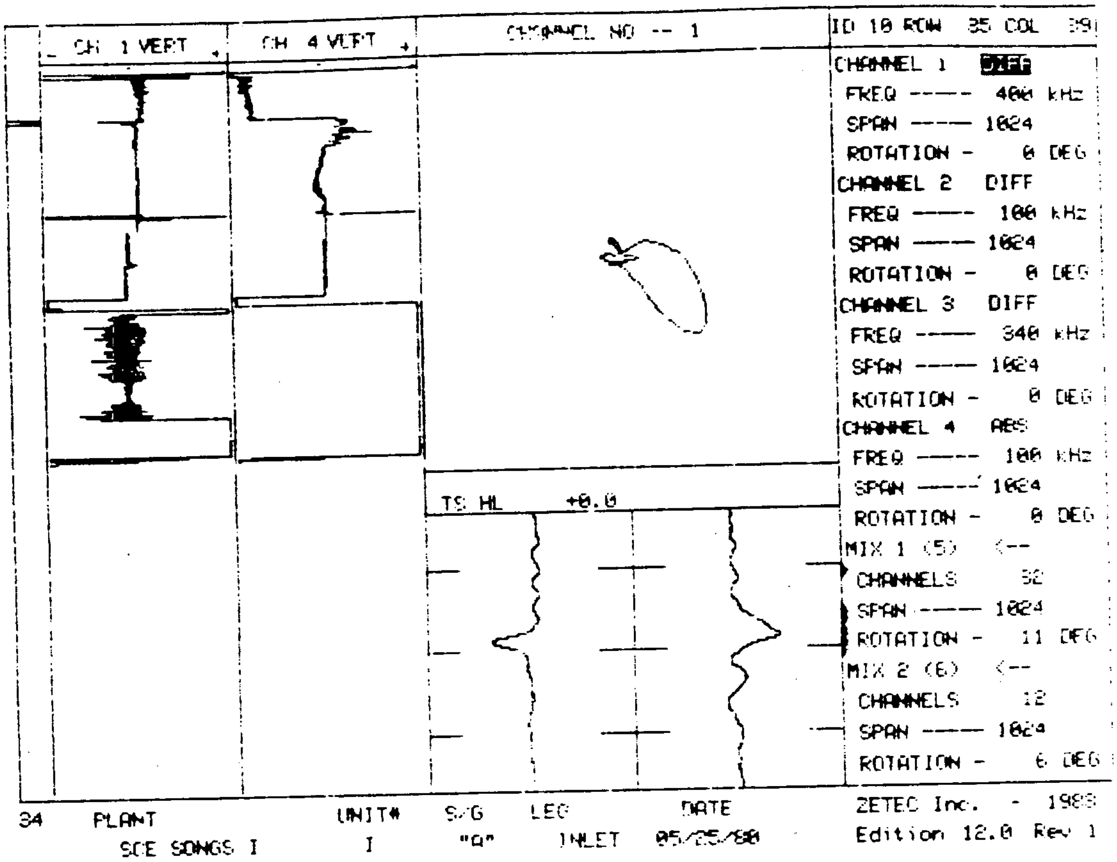
CH 1 VERT
CH 4 VERT
CHANNEL NO -- 1
ID 10 ROW 31 COL 39
CHANNEL 1 DIFF
FREQ ----- 400 kHz
SPAN ------ 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 340 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 32
SPAN ----- 1024
ROTATION - 11 DEG
MIX 2 (6) <--
CHANNELS 12
SPAN ----- 1024
ROTATION - 6 DEG
TS HL +0.0
34 PLANT UNIT# S/G LEG DATE
SCE SONGS I I "A" INLET 05/25/88
ZETEC Inc. - 1983
Edition 12.0 Rev 1

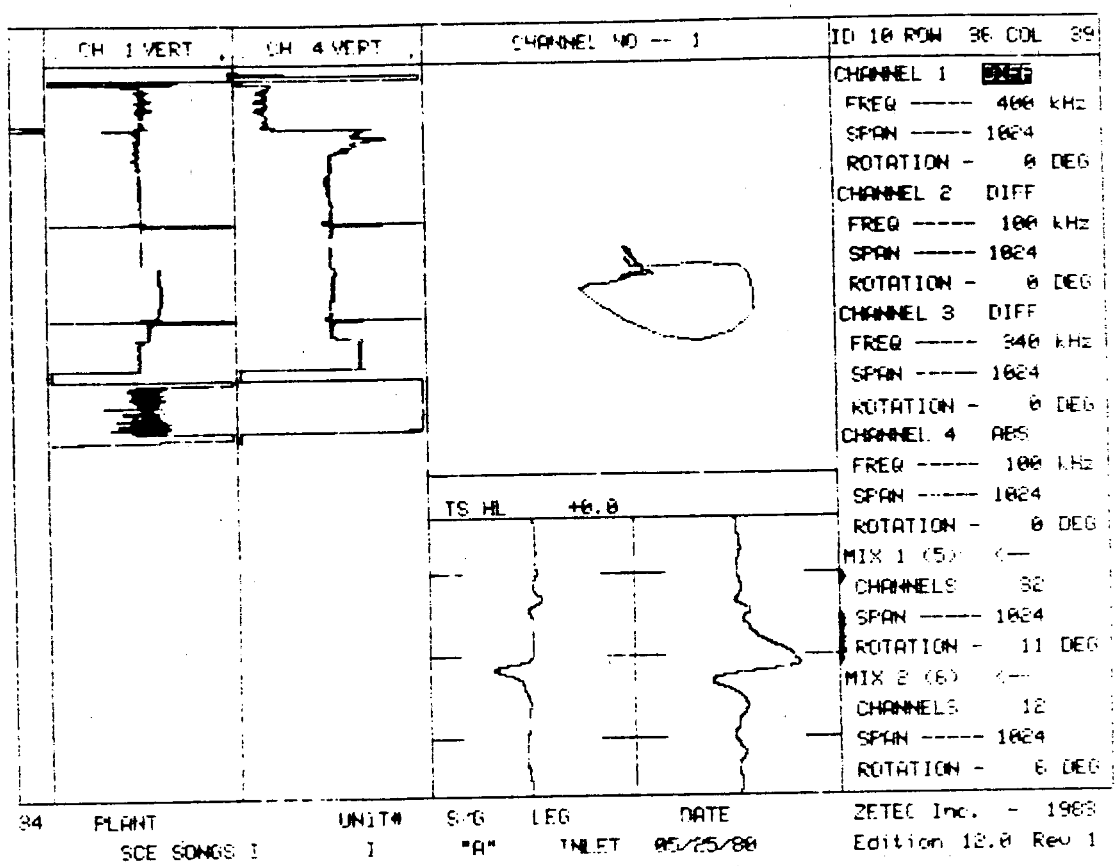


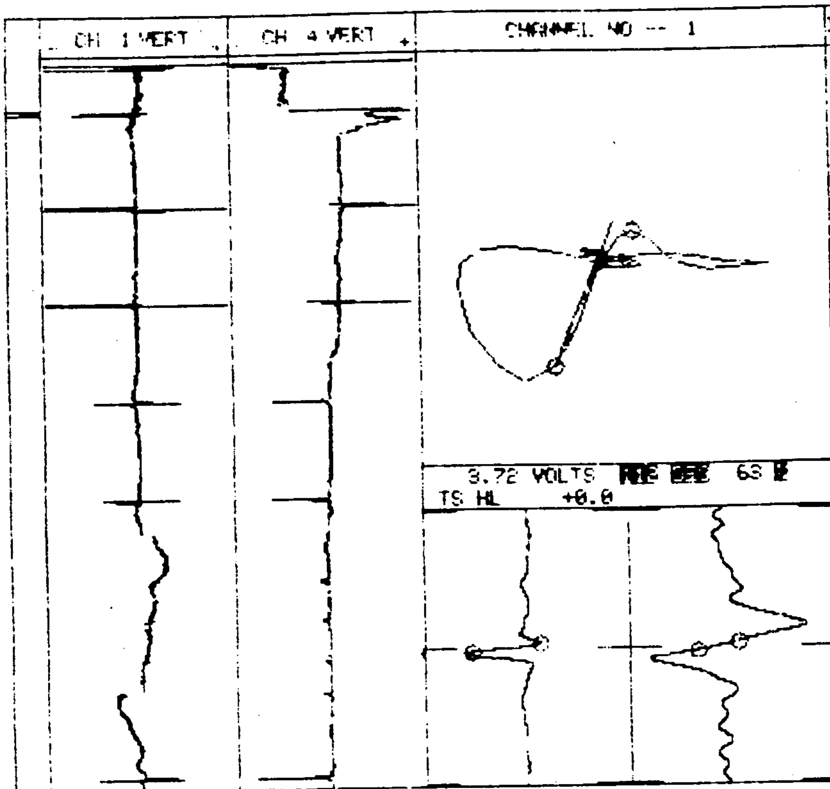
CH 1 VERT
CH 4 VERT
CHANNEL NO -- 1
ID 10 ROW 32 COL 39
CHANNEL 1
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 340 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 32
SPAN ----- 1024
ROTATION - 11 DEG
MIX 2 (6) <--
CHANNELS 12
SPAN ----- 1024
ROTATION - 6 DEG
TS HL +0.0
34 PLANT UNIT# S/G LEG DATE
SCE SONGS I I "A" INLET 05/25/88
ZETEC Inc. - 1988
Edition 12.0 Rev 1


CH 1 VERT
CH 4 VERT
CHANNEL NO — 1
ID 10 ROW 33 COL 39
CHANNEL 1
FREQ ——— 400 kHz
SPAN ——— 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ——— 100 kHz
SPAN ——— 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ——— 340 kHz
SPAN ——— 1024
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ——— 100 kHz
SPAN ——— 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 32
SPAN ——— 1024
ROTATION - 11 DEG
MIX 2 (6) <--
CHANNELS 12
SPAN ——— 1024
ROTATION - 6 DEG
TS HL +0.0
34 PLANT UNIT# S/G LEG DATE
SCE SONGS 1 I "A" INLET 05/25/90
ZETEC Inc. - 1983
Edition 12.0 Rev 1


CH 1 VERT
CH 4 VERT
CHANNEL NO -- 1
ID 10 ROW 34 COL 39
CHANNEL 1 DIFF
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 340 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 32
SPAN ----- 1024
ROTATION - 11 DEG
MIX 2 (6) <--
CHANNELS 12
SPAN ----- 1024
ROTATION - 6 DEG
TS HL +0.0
34 PLANT UNIT# S/G LEG DATE
SCE SONGS I I "A" INLET 05/25/88
ZETEC Inc. - 1988
Edition 12.0 Rev 1


CH 1 VERT
CH 4 VERT
CHANNEL NO -- 1
TS HL +0.0
ID 10 ROW 35 COL 39
CHANNEL 1 DIFF
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 340 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 32
SPAN ----- 1024
ROTATION - 11 DEG
MIX 2 (6) <--
CHANNELS 12
SPAN ----- 1024
ROTATION - 6 DEG
34 PLANT UNIT# S/G LEG DATE
SCE SONGS I I "A" INLET 05/25/88
ZETEC Inc. - 1988
Edition 12.0 Rev 1


CH 1 VERT
CH 4 VERT
CHANNEL NO -- 1
ID 10 ROW 36 COL 39
CHANNEL 1 DIFF
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 340 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <—
CHANNELS 32
SPAN ----- 1024
ROTATION - 11 DEG
MIX 2 (6) <—
CHANNELS 12
SPAN ----- 1024
ROTATION - 6 DEG
TS HL +0.0
34 PLANT
SCE SONGS I
UNIT#
I
S/G
"A"
LEG
INLET
DATE
05/25/80
ZETEC Inc. - 1983
Edition 12.0 Rev 1



ID 10 ROW 37 COL 39

CHANNEL 1 [illegible]
FREQ ------ 400 kHz
SPAN ------ 1024
ROTATION - 0 DEG

CHANNEL 2 DIFF
FREQ ------ 100 kHz
SPAN ------ 1024
ROTATION - 0 DEG

CHANNEL 3 DIFF
FREQ ------ 340 kHz
SPAN ------ 1024
ROTATION - 0 DEG

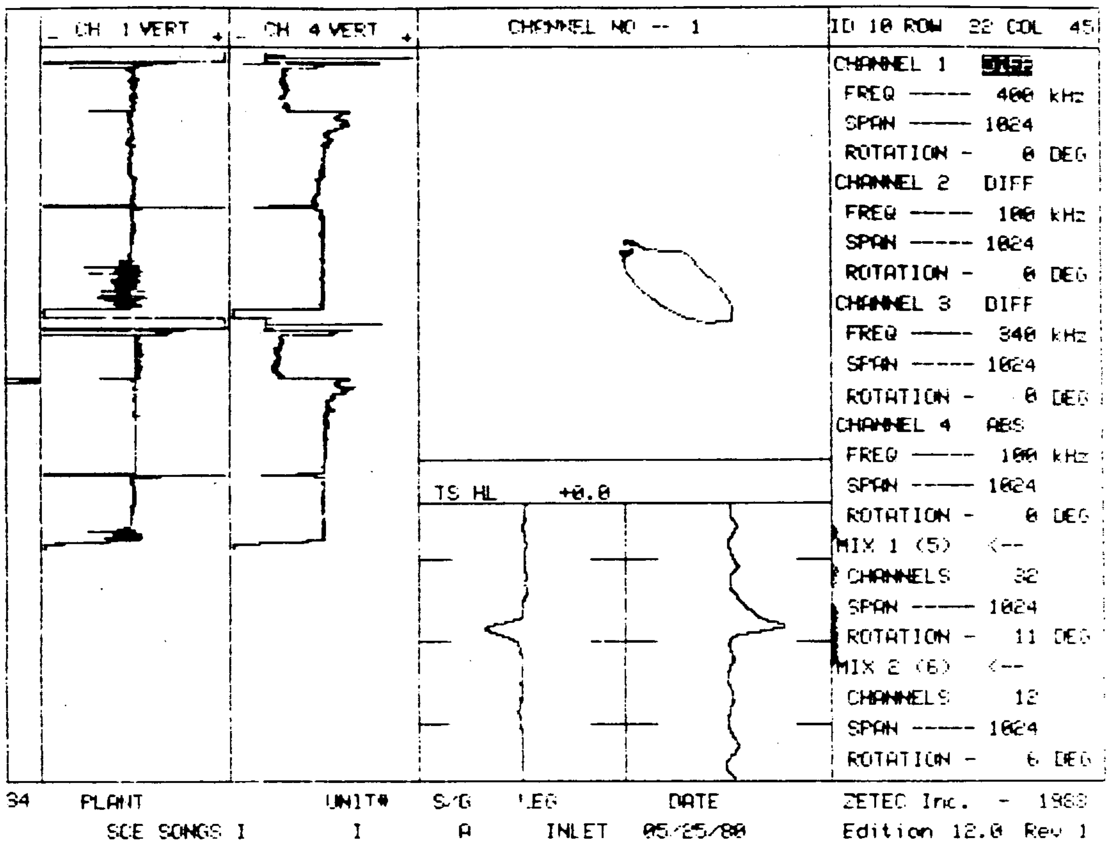
CHANNEL 4 ABS
FREQ ------ 100 kHz
SPAN ------ 1024
ROTATION - 0 DEG

MIX 1 (5) <--
CHANNELS 32
SPAN ------ 1024
ROTATION - 11 DEG

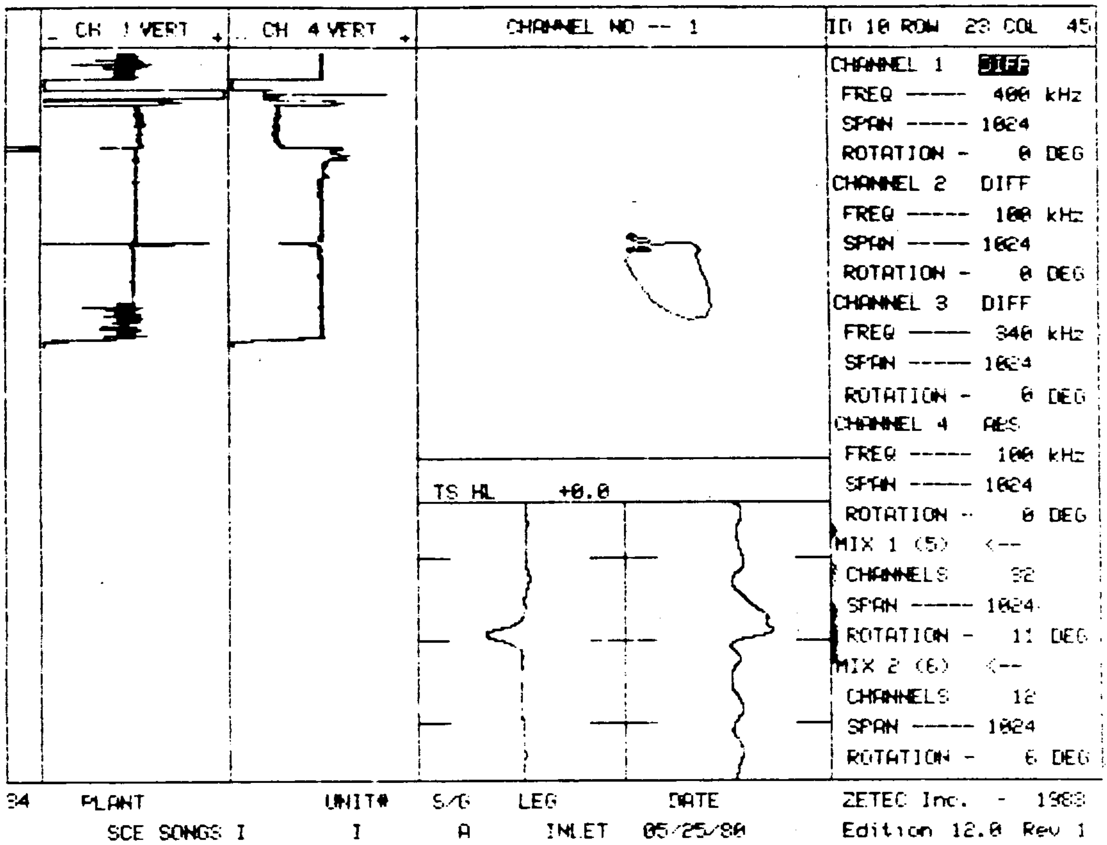
MIX 2 (6) <--
CHANNELS 12
SPAN ------ 1024
ROTATION - 6 DEG

34	PLANT	UNIT#	S/G	LEG	DATE	ZETEC Inc. - 1982
	SCE SONGS I	I	"A"	INLET	05/25/80	Edition 12.0 Rev 1

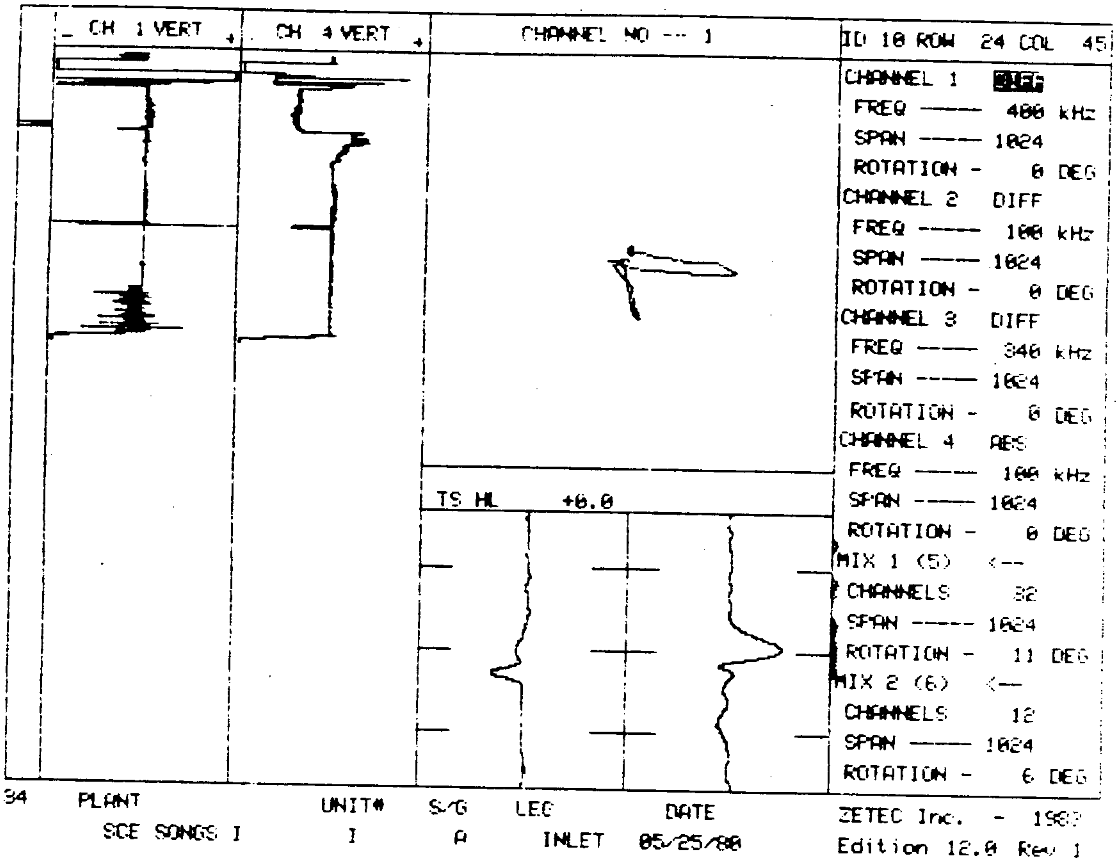
1980 COLUMN 45

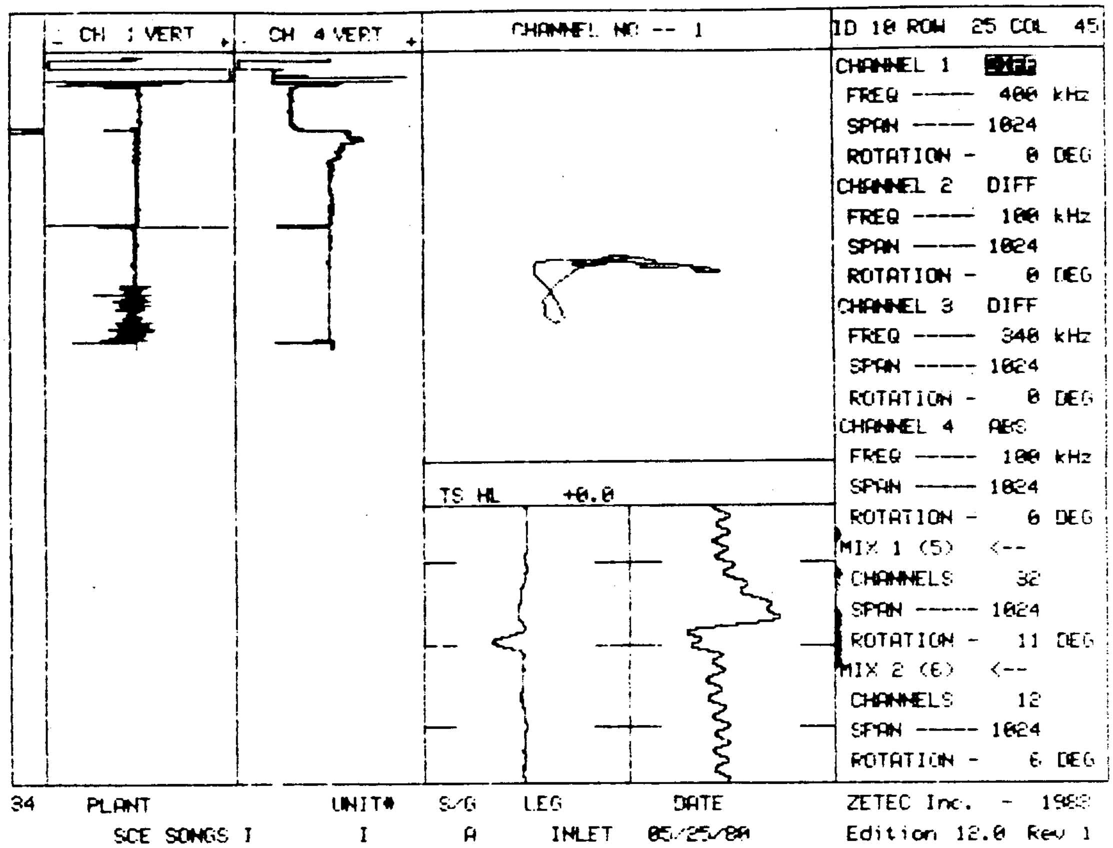


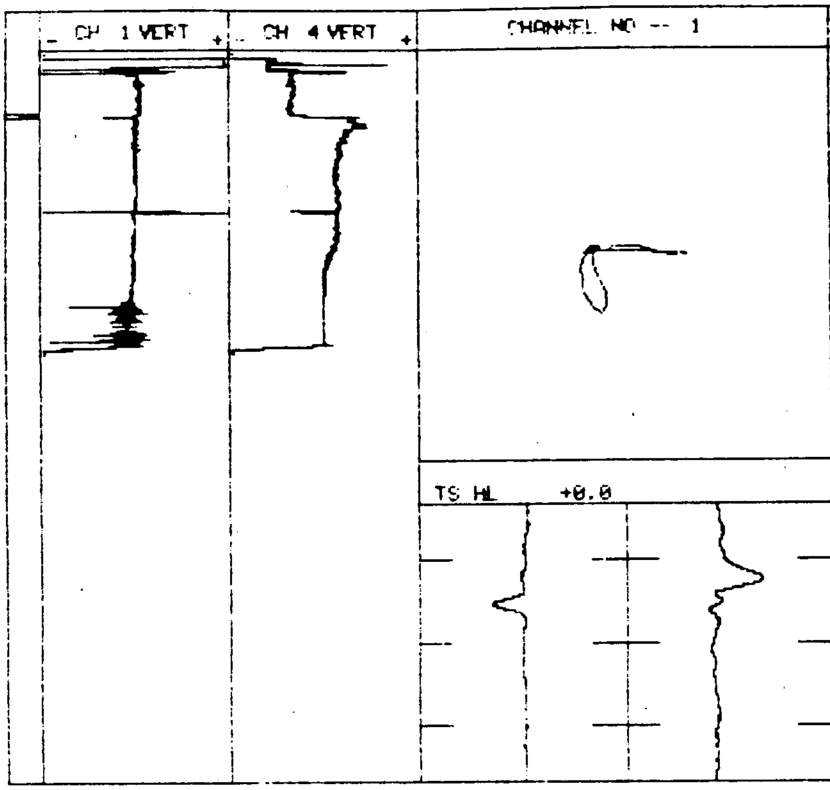
CH 1 VERT
CH 4 VERT
CHANNEL NO -- 1
ID 10 ROW 22 COL 45
CHANNEL 1
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 340 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 32
SPAN ----- 1024
ROTATION - 11 DEG
MIX 2 (6) <--
CHANNELS 12
SPAN ----- 1024
ROTATION - 6 DEG
TS HL +0.0
34 PLANT UNIT# S/G LEG DATE
SCE SONGS I I A INLET 05/25/80
ZETEC Inc. - 1983
Edition 12.0 Rev 1



CH 1 VERT
CH 4 VERT
CHANNEL NO -- 1
ID 10 ROW 23 COL 45
CHANNEL 1 DIFF
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 340 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 32
SPAN ----- 1024
ROTATION - 11 DEG
MIX 2 (6) <--
CHANNELS 12
SPAN ----- 1024
ROTATION - 6 DEG
TS HL +0.0
34 PLANT UNIT# S/G LEG DATE
SCE SONGS I I A INLET 05/25/80
ZETEC Inc. - 1983
Edition 12.0 Rev 1


CH 1 VERT
CH 4 VERT
CHANNEL NO -- 1
ID 18 ROW 24 COL 45
CHANNEL 1
FREQ ---- 400 kHz
SPAN ---- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ---- 100 kHz
SPAN ---- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ---- 340 kHz
SPAN ---- 1024
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ---- 100 kHz
SPAN ---- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 32
SPAN ---- 1024
ROTATION - 11 DEG
MIX 2 (6) <--
CHANNELS 12
SPAN ---- 1024
ROTATION - 6 DEG
TS HL +0.0
34
PLANT
SCE SONGS I
UNIT#
I
S/G
A
LEG
INLET
DATE
05/25/80
ZETEC Inc. - 1983
Edition 12.0 Rev 1


CH 1 VERT
CH 4 VERT
CHANNEL NO -- 1
ID 10 ROW 25 COL 45
CHANNEL 1
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 340 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 6 DEG
MIX 1 (5) <--
CHANNELS 32
SPAN ----- 1024
ROTATION - 11 DEG
MIX 2 (6) <--
CHANNELS 12
SPAN ----- 1024
ROTATION - 6 DEG
TS HL +0.0
34 PLANT UNIT# S/G LEG DATE
SCE SONGS I I A INLET 05/25/88
ZETEC Inc. - 1988
Edition 12.0 Rev 1

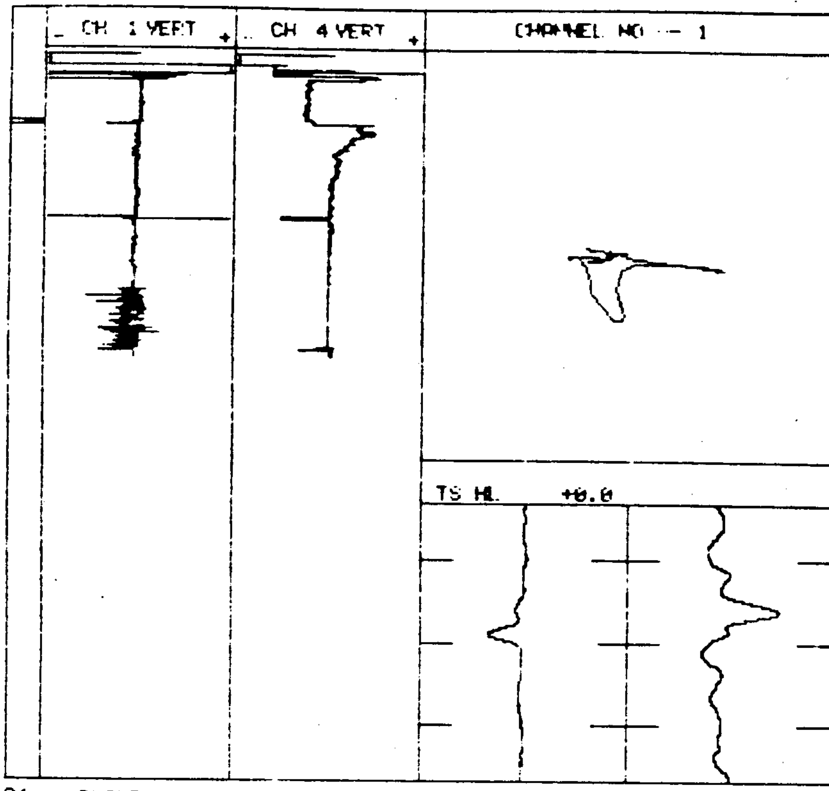


ID 10 ROW 26 COL 45

CHANNEL 1 DIFF
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 340 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 32
SPAN ----- 1024
ROTATION - 11 DEG
MIX 2 (6) <--
CHANNELS 12
SPAN ----- 1024
ROTATION - 6 DEG

34	PLANT	UNIT#	S/G	LEG	DATE
	SCE SONGS I	I	A	INLET	05/25/80

ZETEC Inc. - 1983
Edition 12.0 Rev 1

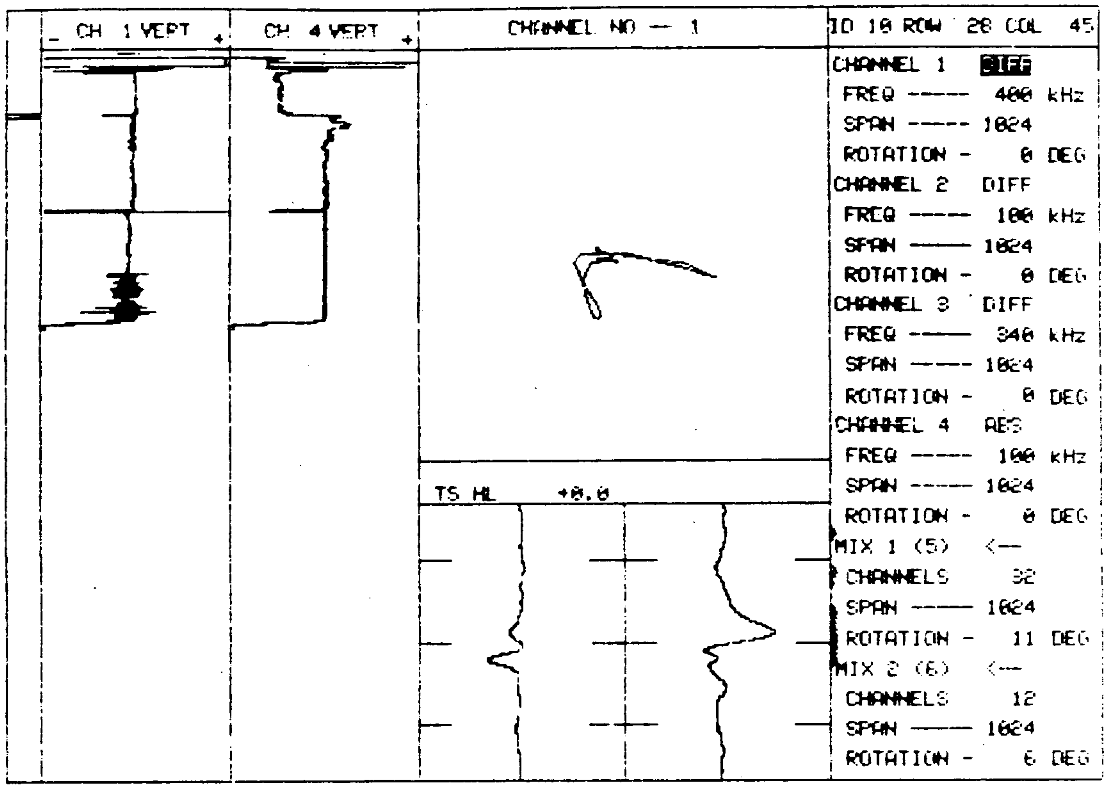


ID 10 ROW 27 COL 45

CHANNEL 1
FREQ ------ 400 kHz
SPAN ------ 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ---- 100 kHz
SPAN ---- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 340 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 32
SPAN ------ 1024
ROTATION - 11 DEG
MIX 2 (6) <--
CHANNELS 12
SPAN ----- 1024
ROTATION - 6 DEG

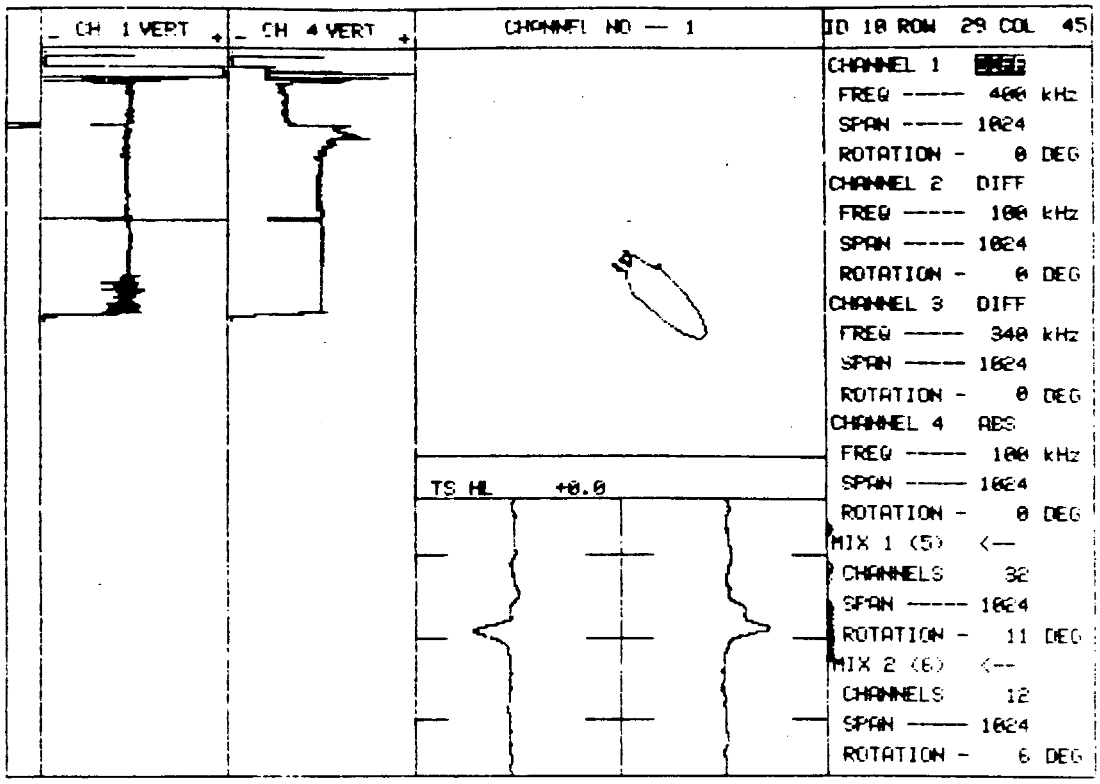
34	PLANT	UNIT#	S/G	LEG	DATE
	SCE SONGS I	I	A	INLET	05/25/80

ZETEC Inc. - 1983
Edition 12.0 Rev 1

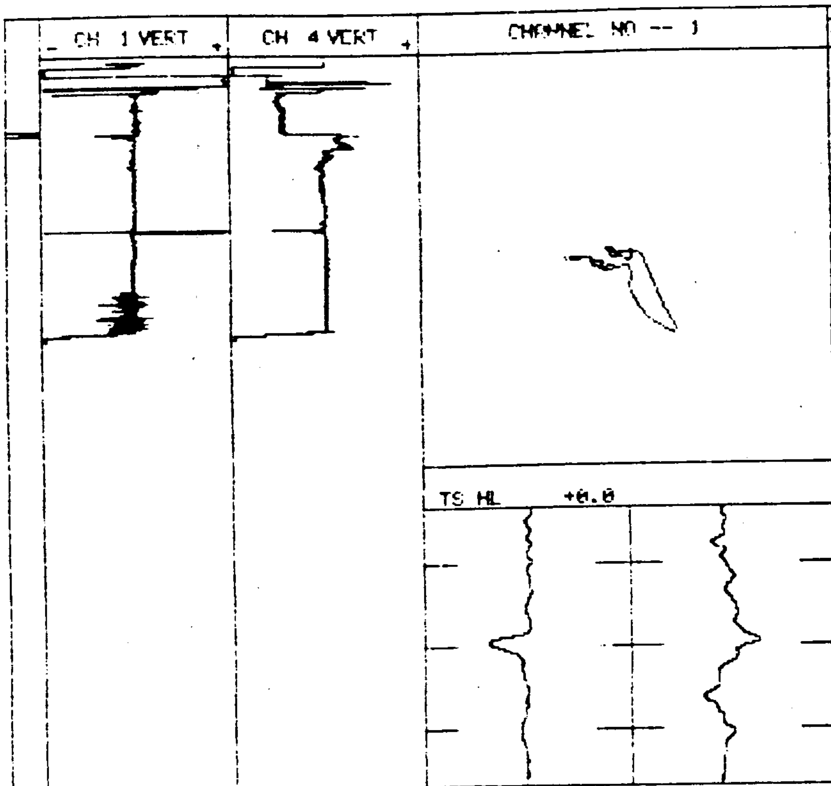


34 PLANT UNIT# S/G LEG DATE ZETEC Inc. - 1988

SCE SONGS I I A INLET 05/25/80 Edition 12.0 Rev 1



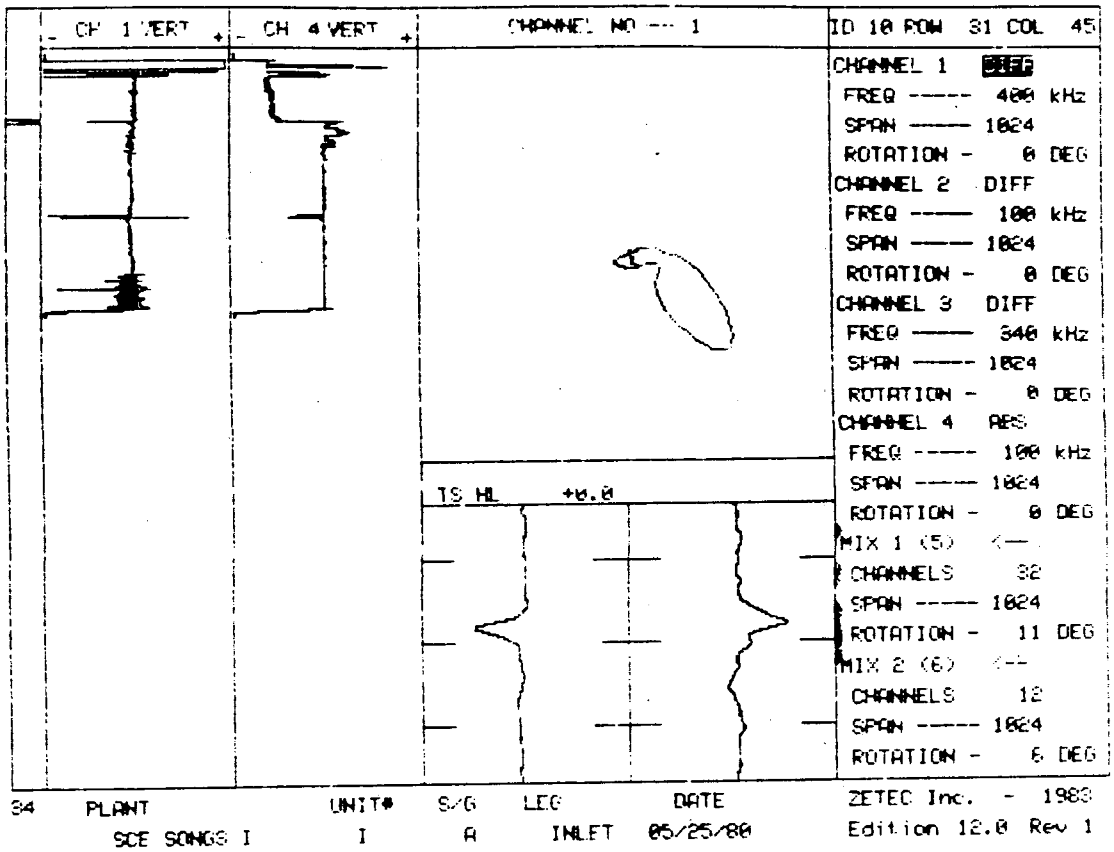
34	PLANT	UNIT#	S/G	LEG	DATE	ZETEC Inc. - 1988
	SCE SONGS I	I	A	INLET	05/25/88	Edition 12.0 Rev 1



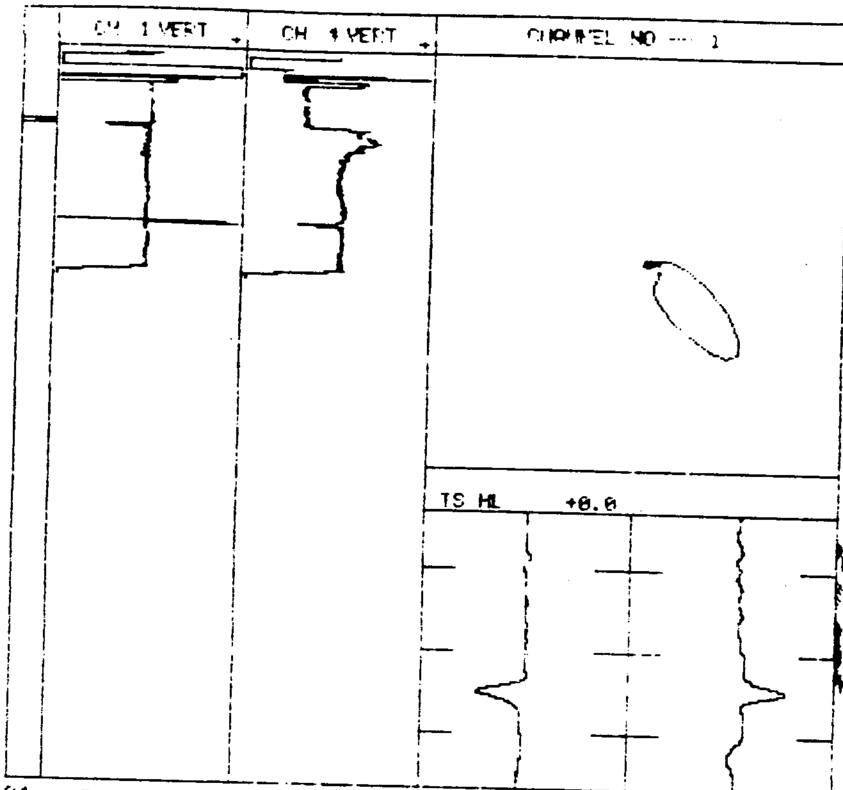
ID 10 ROW 30 COL 45

CHANNEL 1 DIFF
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 340 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 32
SPAN ----- 1024
ROTATION - 11 DEG
MIX 2 (6) <--
CHANNELS 12
SPAN ----- 1024
ROTATION - 6 DEG

34	PLANT	UNIT#	S/G	LEG	DATE	ZETEC Inc. - 1983
	SCE SONGS I	I	A	INLET	05/25/88	Edition 12.0 Rev 1



CH 1 VERT
CH 4 VERT
CHANNEL NO --- 1
ID 10 ROW 31 COL 45
CHANNEL 1
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 340 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
TS HL +0.0
MIX 1 (5)
CHANNELS 32
SPAN ----- 1024
ROTATION - 11 DEG
MIX 2 (6)
CHANNELS 12
SPAN ----- 1024
ROTATION - 6 DEG
34 PLANT UNIT# S/G LEG DATE
SCE SONGS I I A INLET 05/25/80
ZETEC Inc. - 1983
Edition 12.0 Rev 1



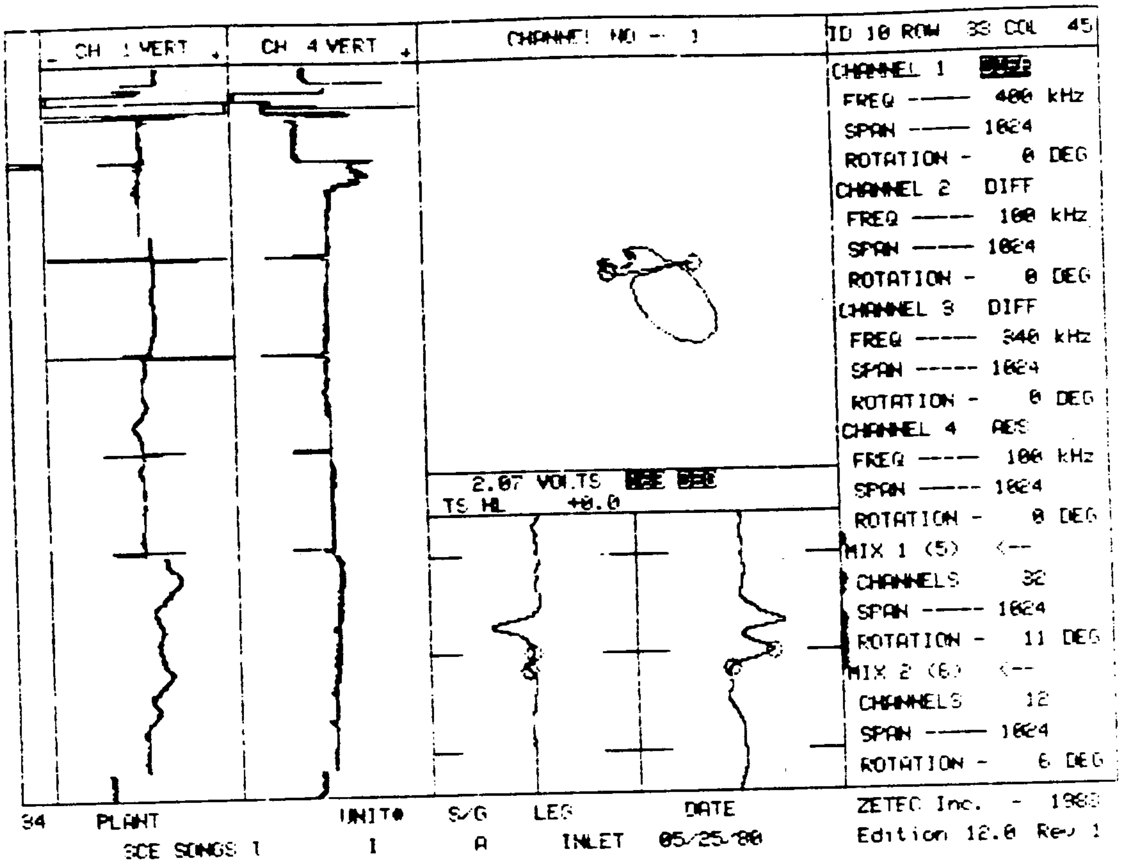
ID 10 ROW 32 COL 45

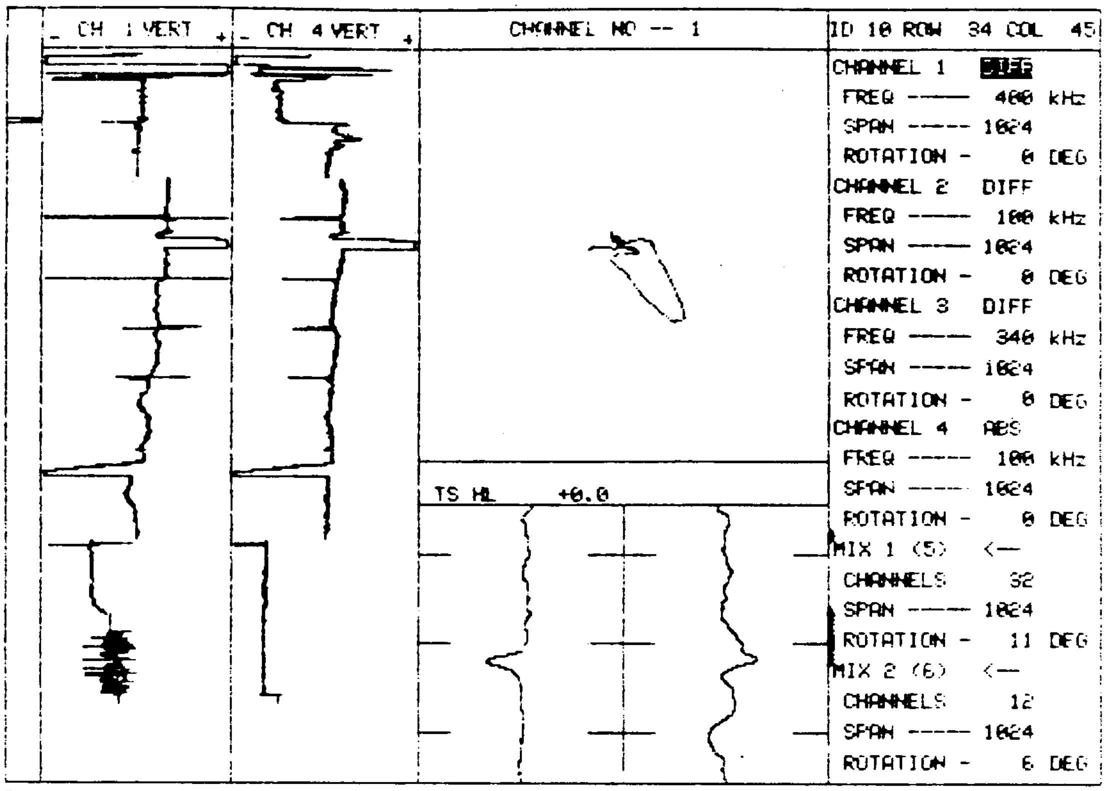
CHANNEL 1 DIFF
FREQ ——— 400 kHz
SPAN ——— 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ——— 100 kHz
SPAN ——— 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ——— 340 kHz
SPAN ——— 1024
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ——— 100 kHz
SPAN ——— 1024
ROTATION - 0 DEG
MIX 1 (5) <—
CHANNELS 32
SPAN ——— 1024
ROTATION - 11 DEG
MIX 2 (6) <—
CHANNELS 12
SPAN ——— 1024
ROTATION - 6 DEG

34

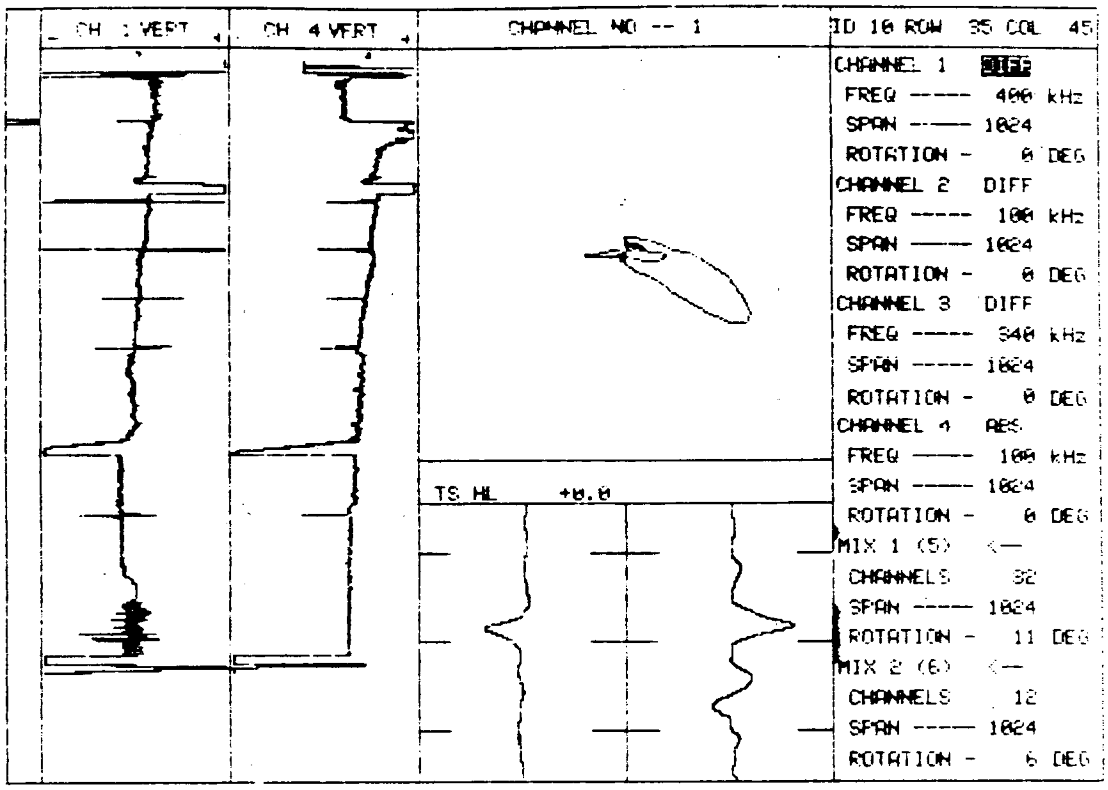
PLANT	UNIT#	S/G	LEG	DATE
SCE SONGS I	1	A	INLET	05/25/88

ZETEC Inc. - 1983
Edition 12.0 Rev 1

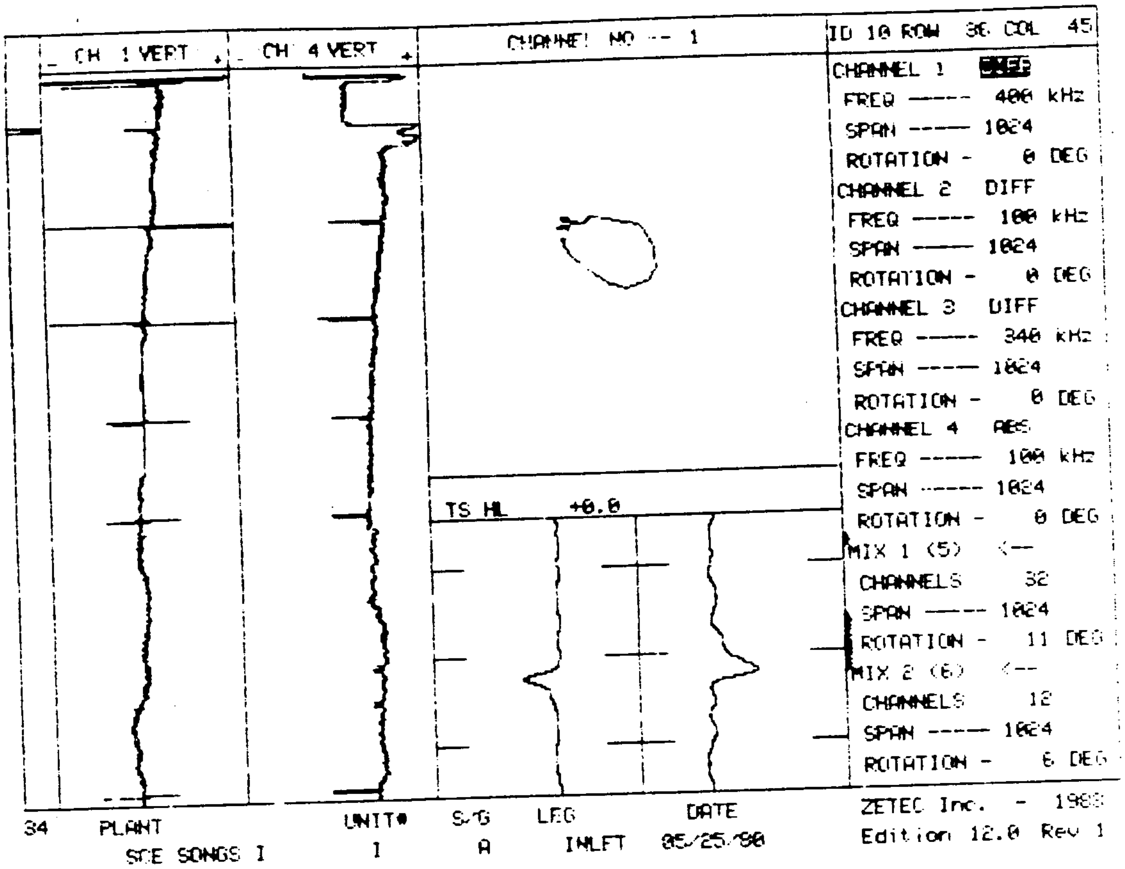

CH 1 VERT
CH 4 VERT
CHANNEL NO -- 1
ID 10 ROW 33 COL 45
CHANNEL 1
FREQ ------ 400 kHz
SPAN ------ 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 340 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 32
SPAN ----- 1024
ROTATION - 11 DEG
MIX 2 (6) <--
CHANNELS 12
SPAN ----- 1024
ROTATION - 6 DEG
2.07 VOLTS
TS HL +0.0
34 PLANT UNIT# S/G LEG DATE
SCE SONGS 1 1 A INLET 05/25/80
ZETEC Inc. - 1983
Edition 12.0 Rev 1



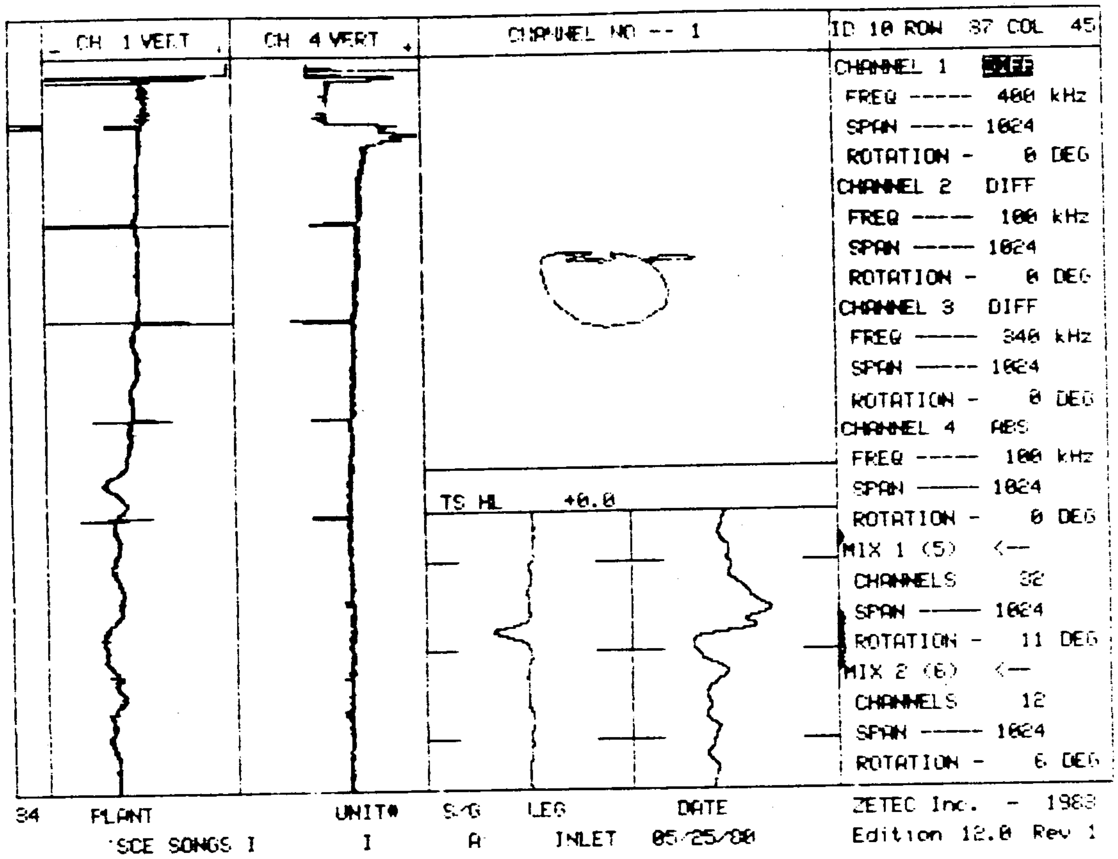
34	PLANT	UNIT#	S/G	LEG	DATE	ZETEC Inc. - 1988
	SCE SONGS I	I	A	INLET	05/25/80	Edition 12.0 Rev 1



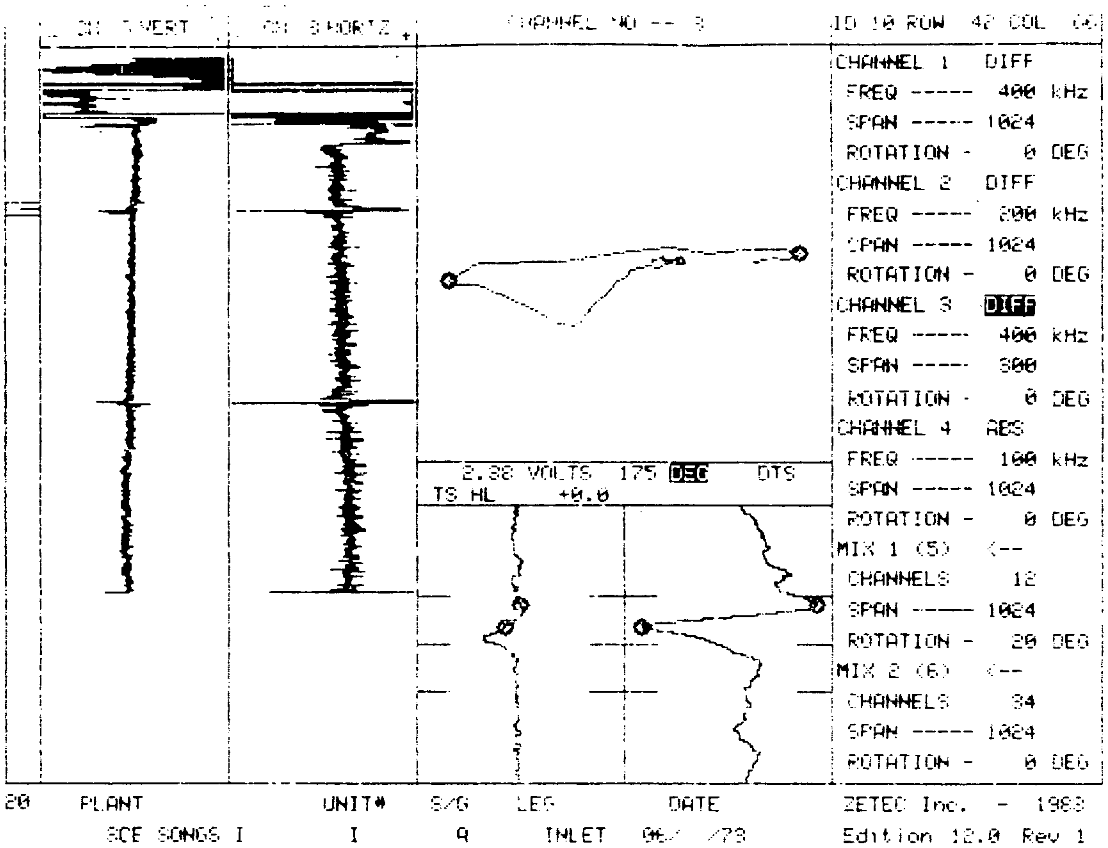
34	PLANT	UNIT#	S/G	LEG	DATE	ZETEC Inc. - 1983
	SCE SONGS I	I	A	INLET	05/25/90	Edition 12.0 Rev 1



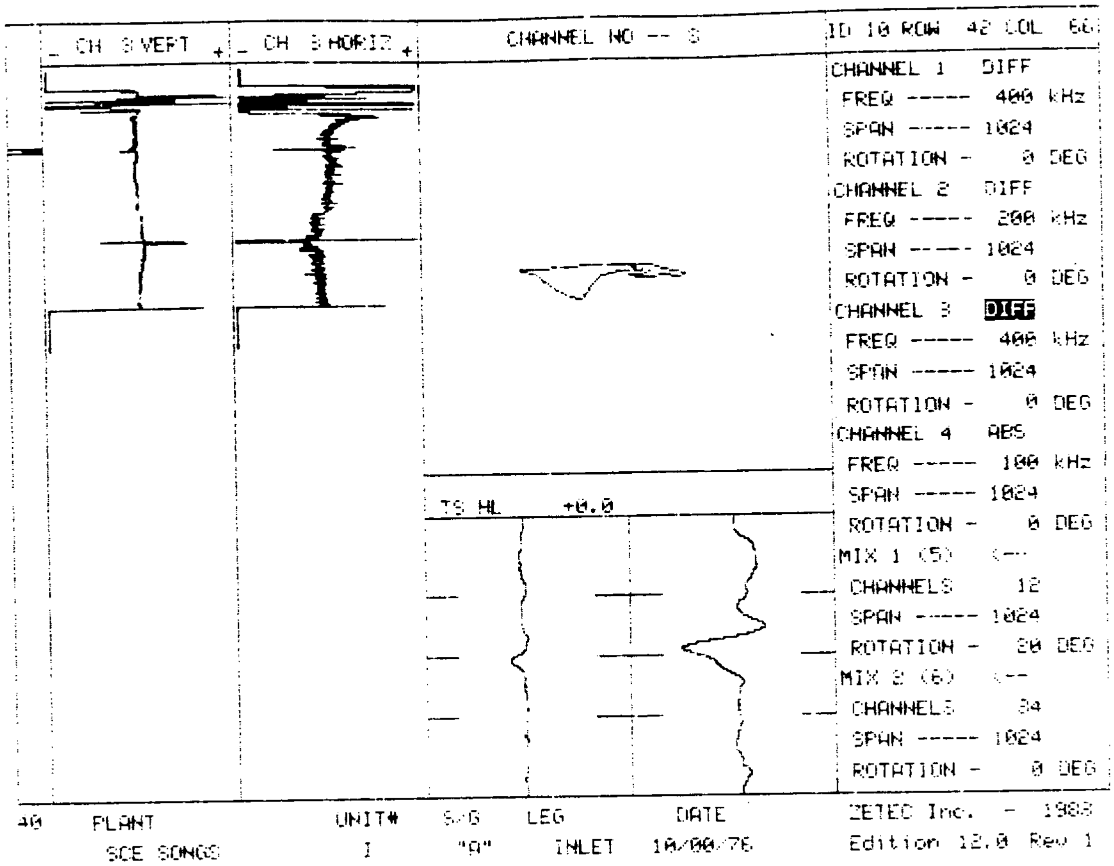
CH 1 VERT
CH 4 VERT
CHANNEL NO -- 1
ID 10 ROW 36 COL 45
CHANNEL 1
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 340 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 32
SPAN ----- 1024
ROTATION - 11 DEG
MIX 2 (6) <--
CHANNELS 12
SPAN ----- 1024
ROTATION - 6 DEG
TS HL +0.0
34 PLANT
SCE SONGS I
UNIT# 1
S/G A
LEG INLET
DATE 05/25/90
ZETEC Inc. - 1983
Edition 12.0 Rev 1


CH 1 VERT
CH 4 VERT
CHANNEL NO -- 1
ID 10 ROW 37 COL 45
CHANNEL 1
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 340 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 32
SPAN ----- 1024
ROTATION - 11 DEG
MIX 2 (6) <--
CHANNELS 12
SPAN ----- 1024
ROTATION - 6 DEG
TS HL +0.0
34 PLANT UNIT# S/G LEG DATE
SCE SONGS I I A INLET 05/25/80
ZETEC Inc. - 1983
Edition 12.0 Rev 1

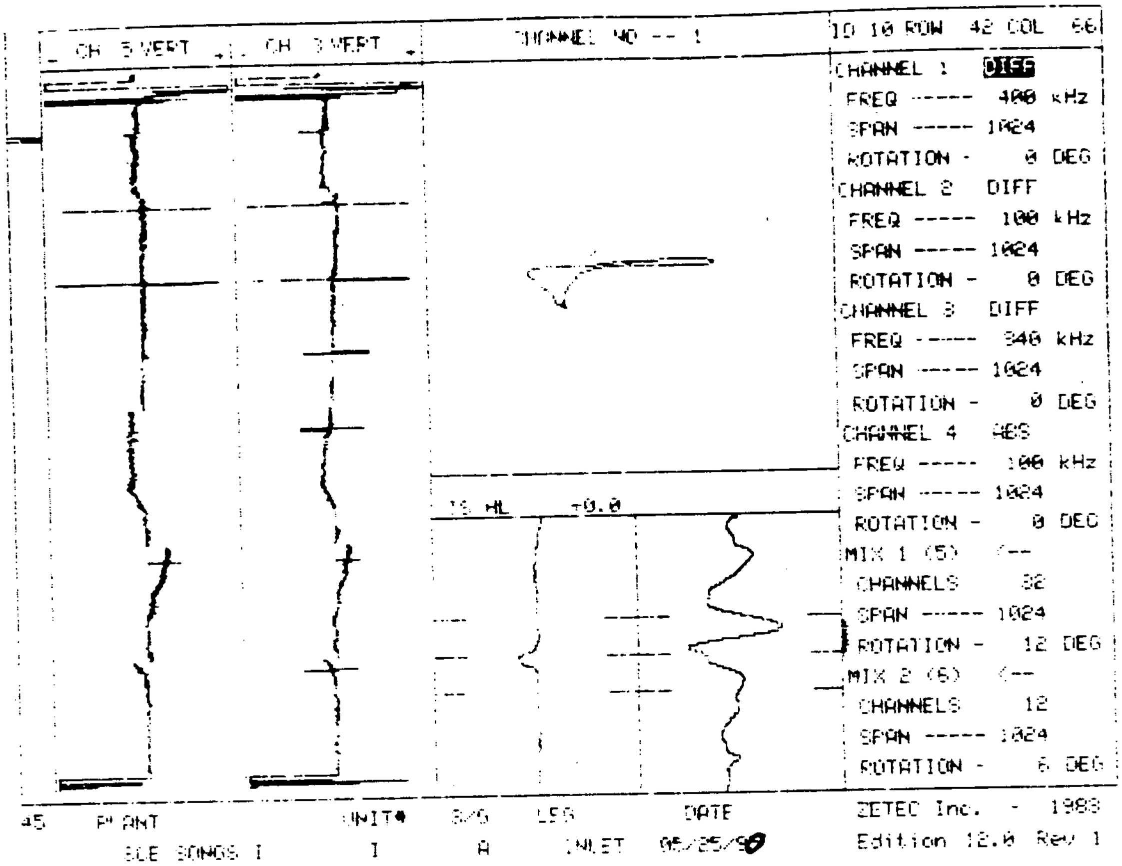
APPENDIX E



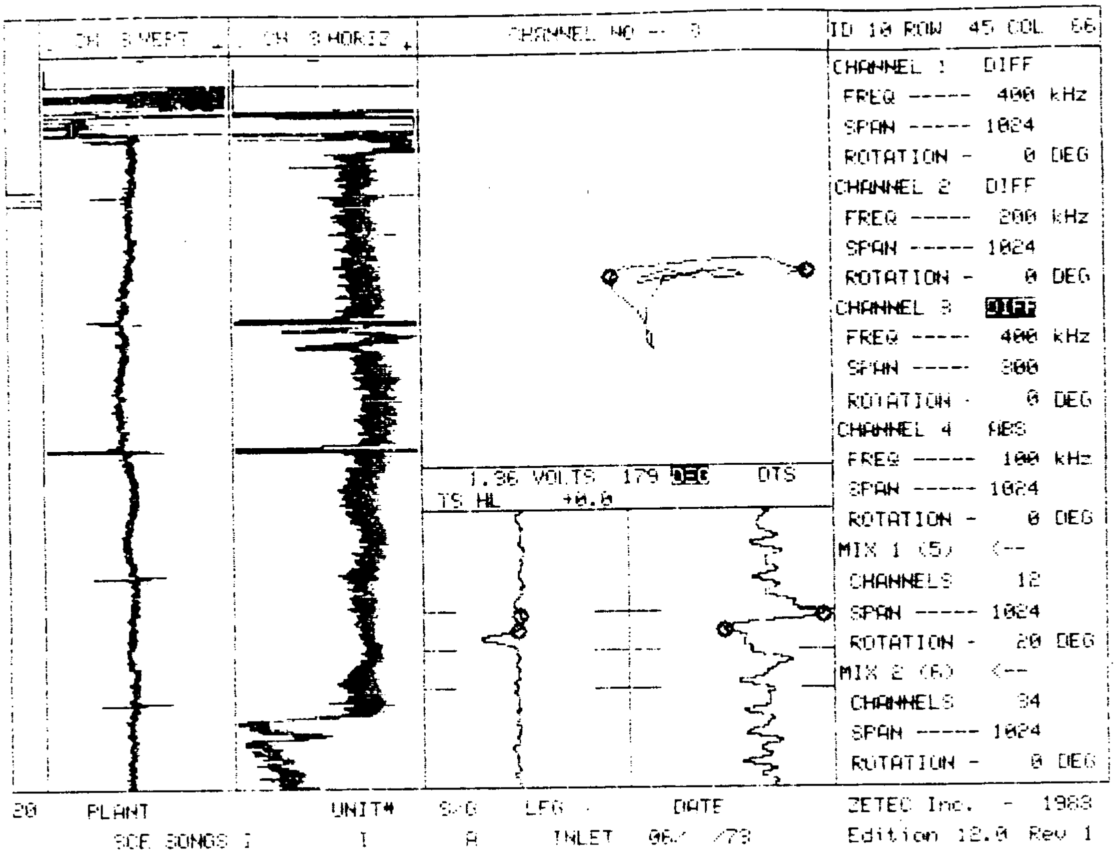
CH 3 VERT
CH 3 HORIZ
CHANNEL NO -- 3
ID 10 ROW 42 COL 66
CHANNEL 1 DIFF
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 200 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 400 kHz
SPAN ----- 300
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 12
SPAN ----- 1024
ROTATION - 20 DEG
MIX 2 (6) <--
CHANNELS 34
SPAN ----- 1024
ROTATION - 0 DEG
2.38 VOLTS 175 DEG DTS
TS HL +0.0
20 PLANT UNIT# S/G LEG DATE
SCE SONGS I I A INLET 06/ /78
ZETEC Inc. - 1983
Edition 12.0 Rev 1

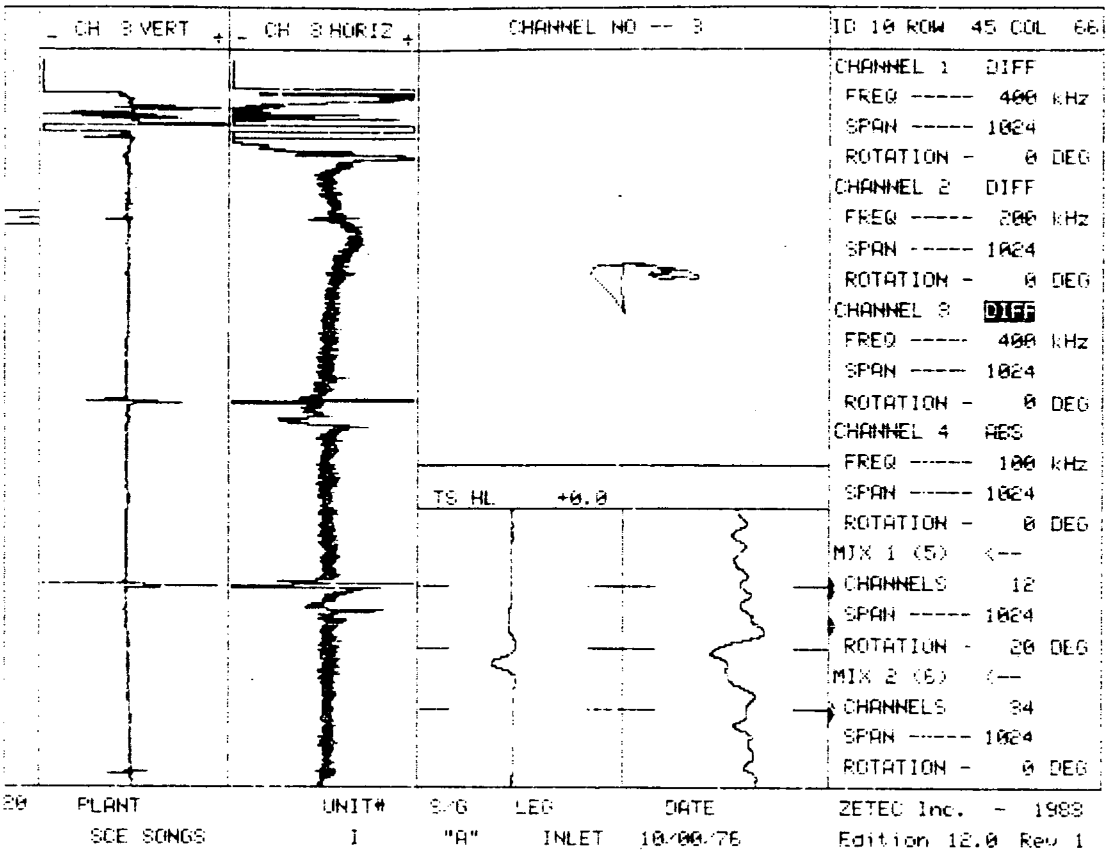


CH 3 VERT
CH 3 HORIZ
CHANNEL NO -- 3
ID 10 ROW 42 COL 66
CHANNEL 1 DIFF
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 200 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 12
SPAN ----- 1024
ROTATION - 20 DEG
MIX 2 (6) <--
CHANNELS 34
SPAN ----- 1024
ROTATION - 0 DEG
TS HL +0.0
40
PLANT
SCE SONGS
UNIT#
I
S/G
"A"
LEG
INLET
DATE
10/00/76
ZETEC Inc. - 1988
Edition 12.0 Rev 1

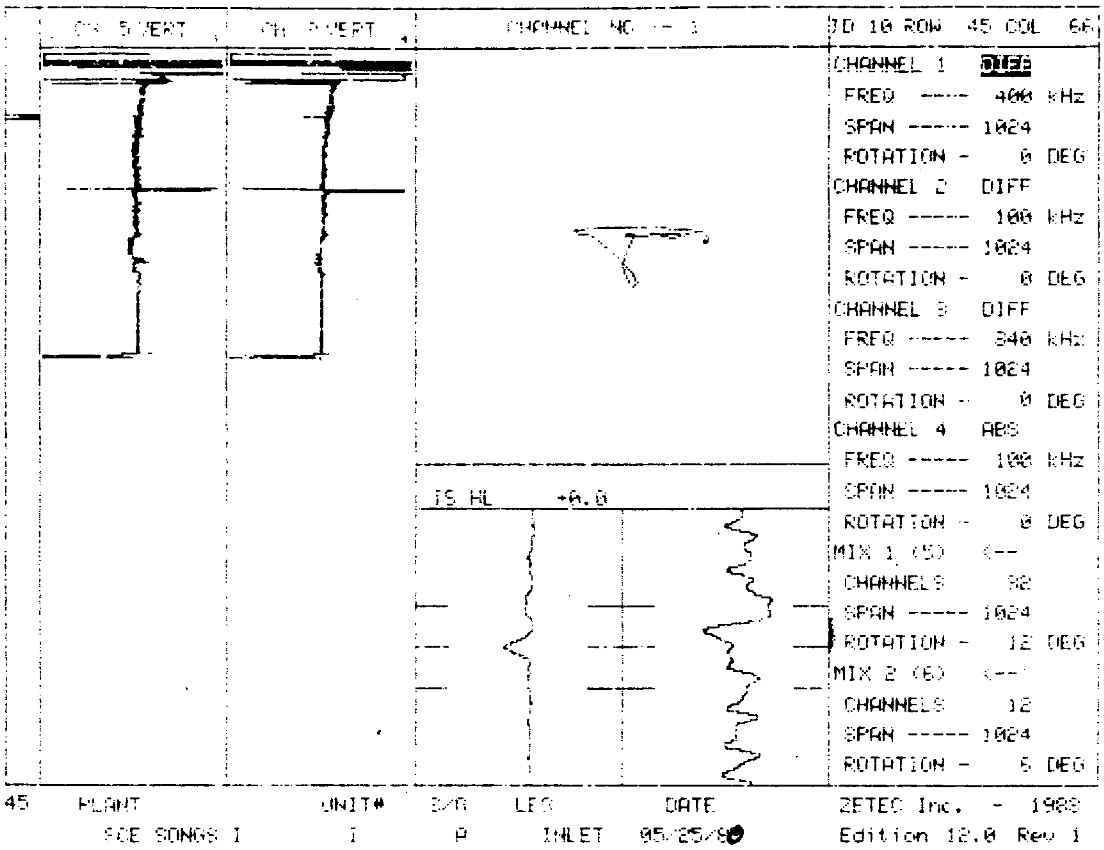


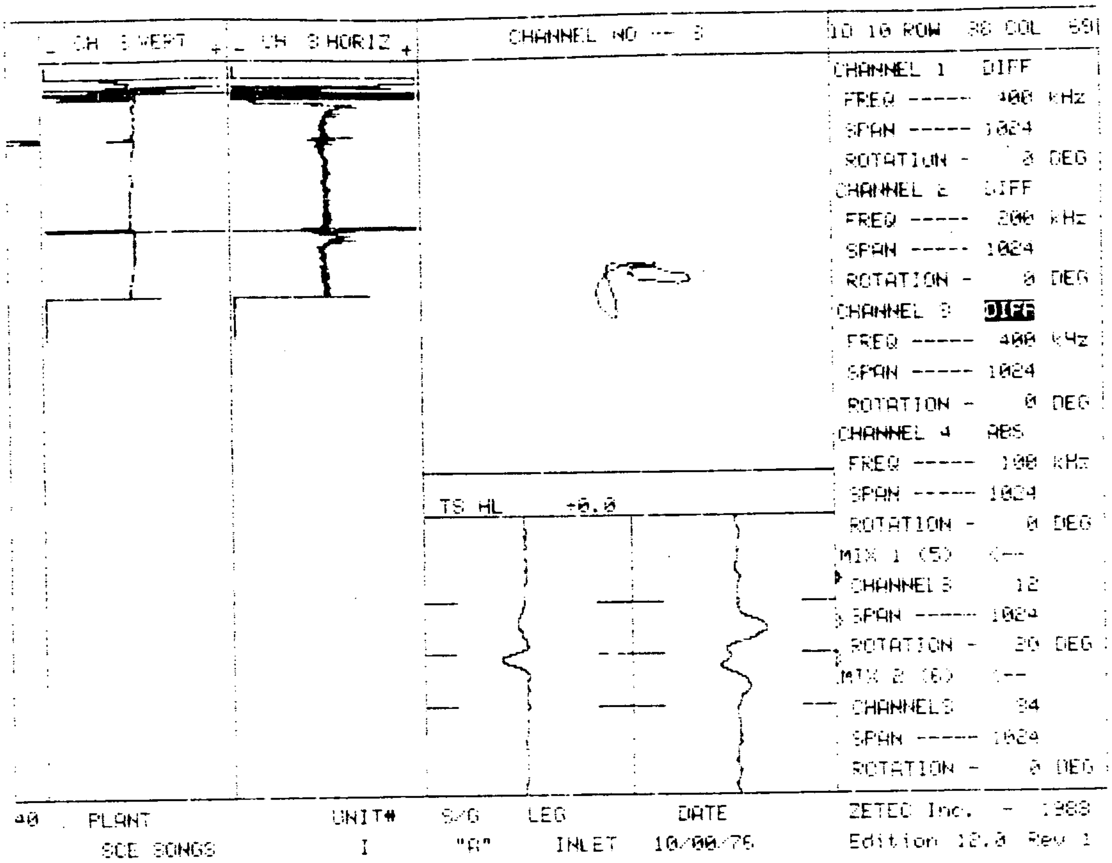
CH 5 VERT
CH 3 VERT
CHANNEL NO -- 1
ID 10 ROW 42 COL 66
CHANNEL 1 DIFF
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 340 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 32
SPAN ----- 1024
ROTATION - 12 DEG
MIX 2 (6) <--
CHANNELS 12
SPAN ----- 1024
ROTATION - 6 DEG
TS HL +0.0
45 PLANT UNIT# S/G LEG DATE
ZETEC Inc. - 1988
Edition 12.0 Rev 1
I A INLET 05/25/90


CH 3 VERT
CH 3 HORIZ
CHANNEL NO -- 3
ID 10 ROW 45 COL 66
CHANNEL 1 DIFF
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 200 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 400 kHz
SPAN ----- 300
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 12
SPAN ----- 1024
ROTATION - 20 DEG
MIX 2 (6) <--
CHANNELS 34
SPAN ----- 1024
ROTATION - 0 DEG
1.36 VOLTS 179 DEG DTS
TS HL +0.0
20 PLANT UNIT# S/G LEG DATE
SCE SONGS 1 1 A INLET 06/ /78
ZETEC Inc. - 1983
Edition 12.0 Rev 1

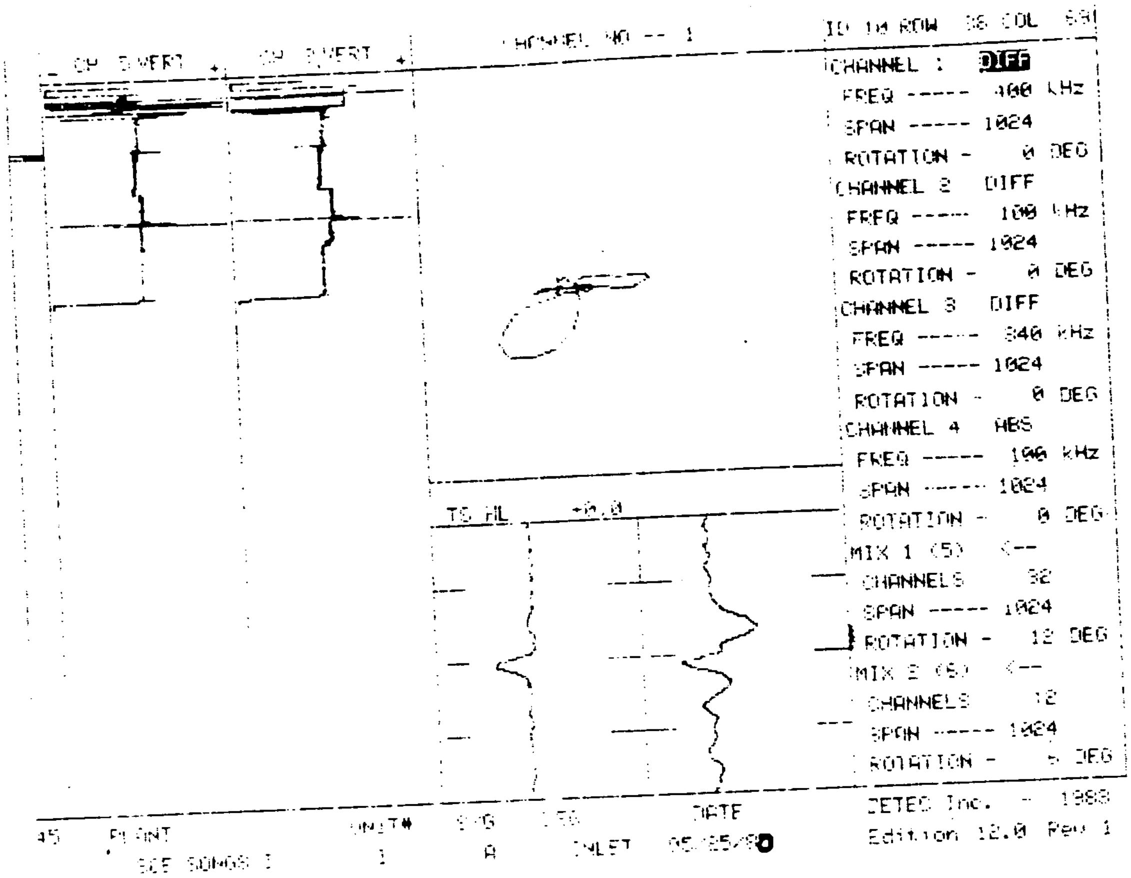


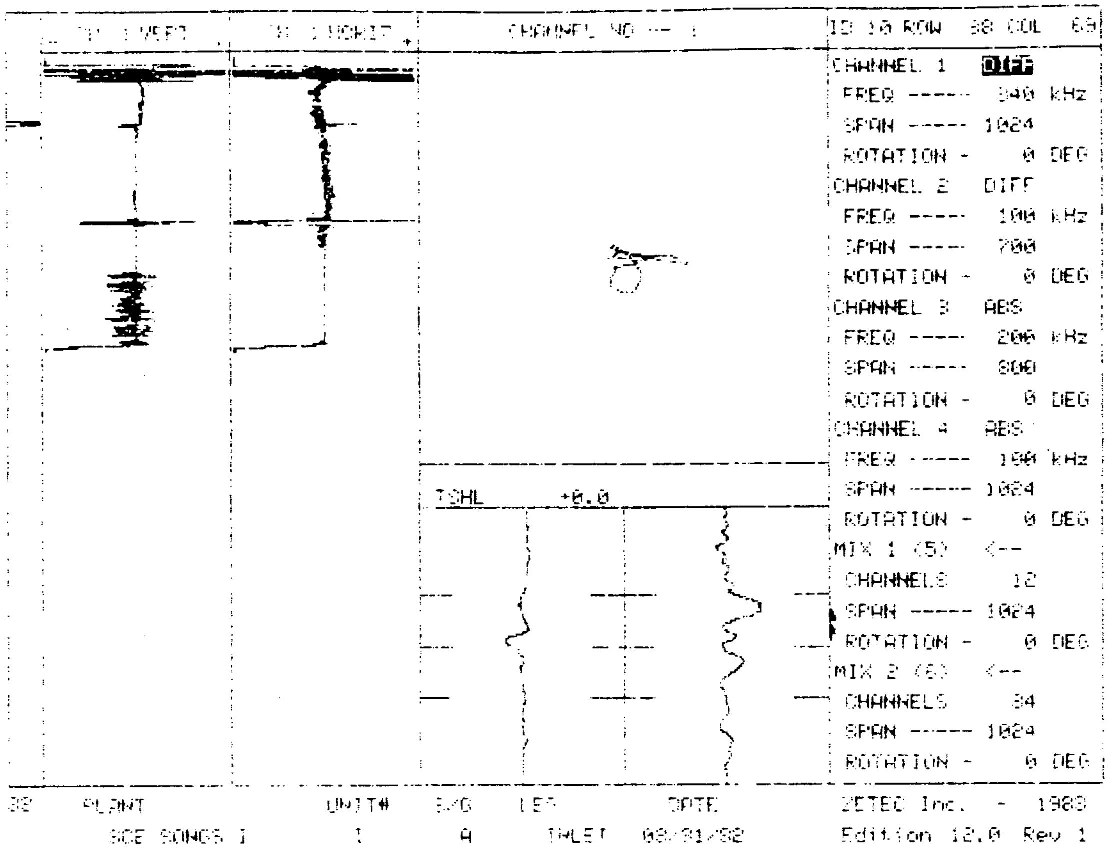
CH 3 VERT
CH 3 HORIZ
CHANNEL NO -- 3
ID 10 ROW 45 COL 66
CHANNEL 1 DIFF
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 200 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 400 kHz
SPAN ---- 1024
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 12
SPAN ----- 1024
ROTATION - 20 DEG
MIX 2 (6) <--
CHANNELS 34
SPAN ----- 1024
ROTATION - 0 DEG
TS HL +0.0
20
PLANT
SCE SONGS
UNIT#
I
S/G
"A"
LEG
INLET
DATE
10/00/76
ZETEC Inc. - 1988
Edition 12.0 Rev 1

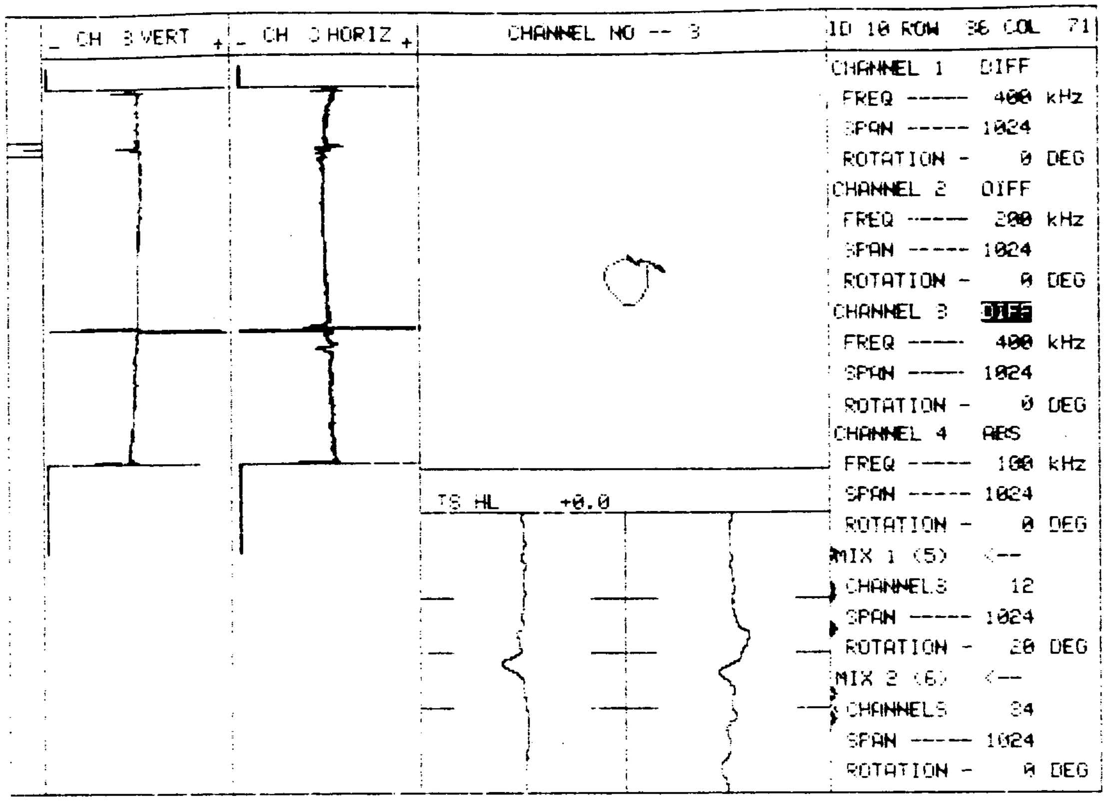

CH 5 VERT
CH 5 VERT
CHANNEL NO -- 1
TD 10 ROW 45 COL 66
CHANNEL 1 DIFF
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 340 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 32
SPAN ----- 1024
ROTATION - 12 DEG
MIX 2 (6) <--
CHANNELS 12
SPAN ----- 1024
ROTATION - 5 DEG
TS HL +0.0
45
PLANT
SCE SONGS I
UNIT#
I
S/G
A
LEG
INLET
DATE
05/25/90
ZETEC Inc. - 1988
Edition 12.0 Rev 1



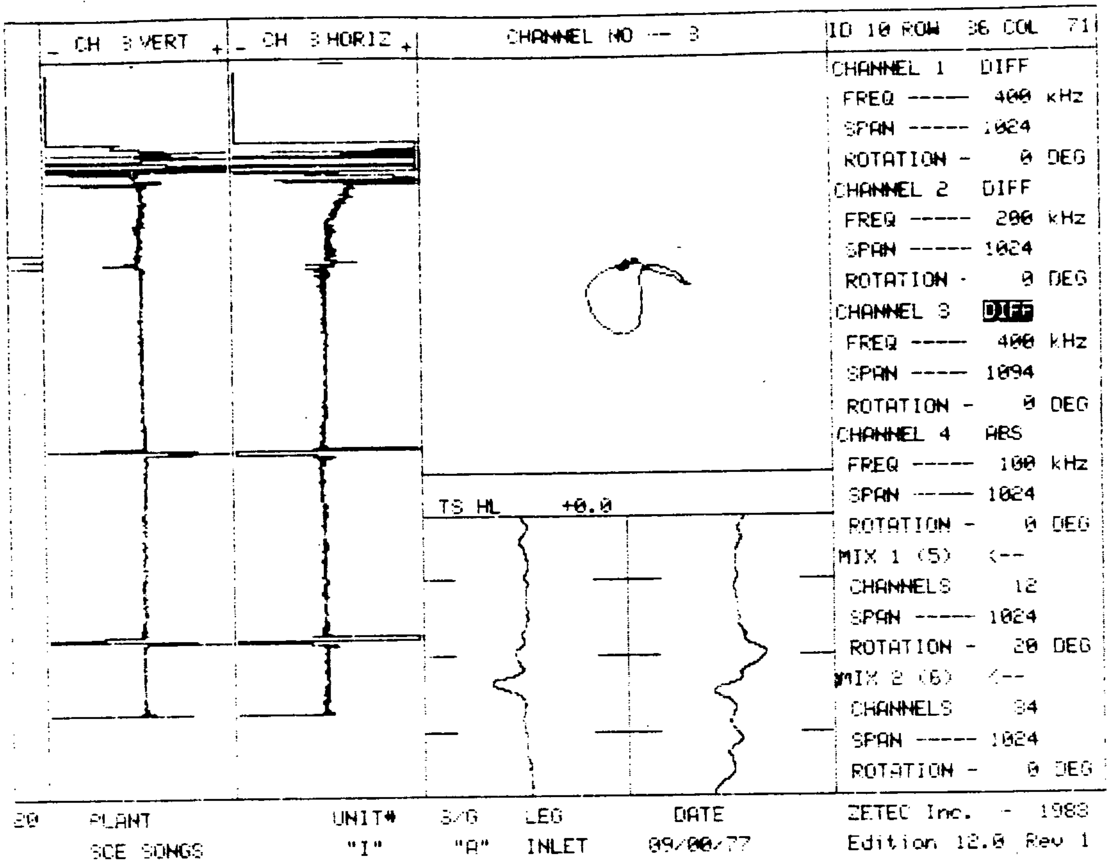
CH 3 VERT
CH 3 HORIZ
CHANNEL NO -- 3
10 10 ROW 38 COL 59
CHANNEL 1 DIFF
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 200 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 12
SPAN ----- 1024
ROTATION - 30 DEG
MIX 2 (6) <--
CHANNELS 34
SPAN ----- 1024
ROTATION - 0 DEG
TS HL +0.0
40 PLANT UNIT# S/G LEG DATE
SCE SONGS I "A" INLET 10/00/76
ZETEC Inc. - 1988
Edition 12.0 Rev 1


CH 3 VERT
CH 3 VERT
CHANNEL NO -- 1
ID 10 ROW 38 COL 69
CHANNEL 1 DIFF
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 840 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 32
SPAN ----- 1024
ROTATION - 12 DEG
MIX 2 (6) <--
CHANNELS 12
SPAN ----- 1024
ROTATION - 5 DEG
TS HL +0.0
ZETEC Inc. - 1988
Edition 12.0 Rev 1
PLANT
UNIT#
1
A
INLET
DATE

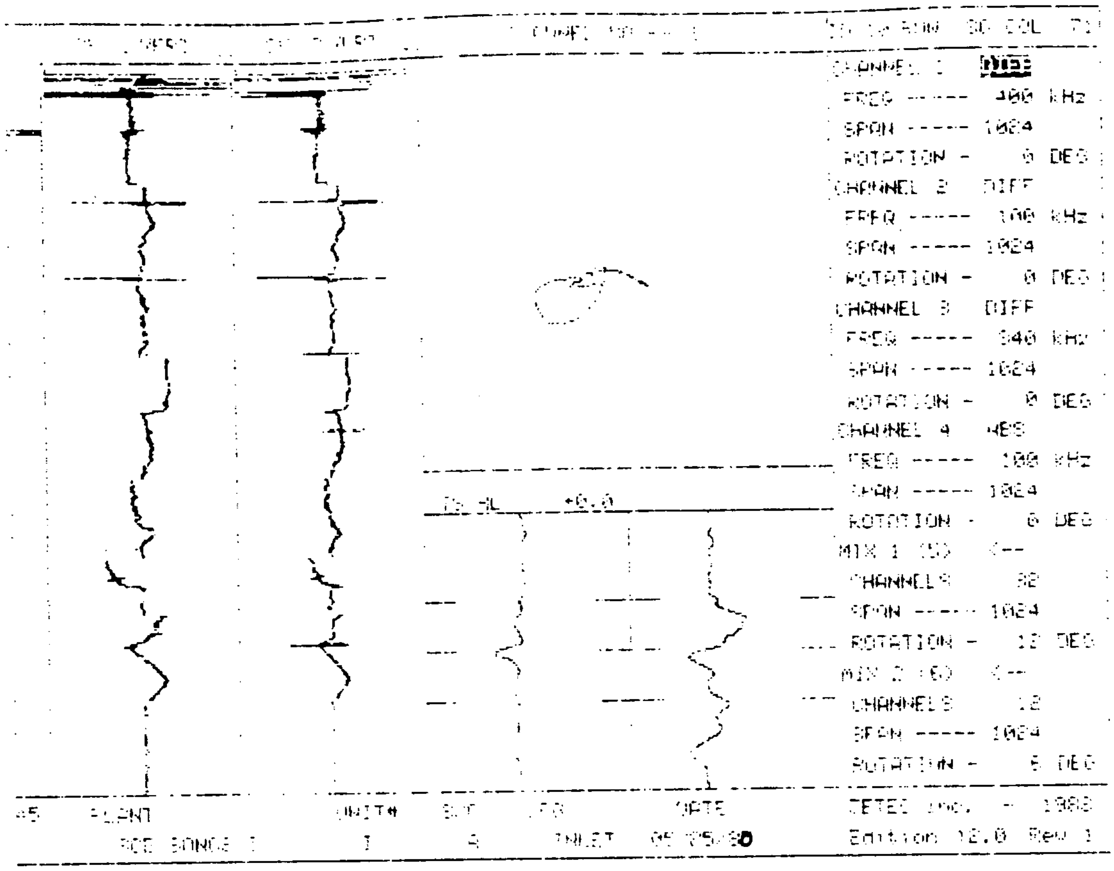

CHANNEL NO -- 1
ID 10 ROW 88 COL 69
CHANNEL 1 DIFF
FREQ ----- 340 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 100 kHz
SPAN ----- 700
ROTATION - 0 DEG
CHANNEL 3 ABS
FREQ ----- 200 kHz
SPAN ----- 800
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 12
SPAN ----- 1024
ROTATION - 0 DEG
MIX 2 (6) <--
CHANNELS 34
SPAN ----- 1024
ROTATION - 0 DEG
TSHL +0.0
PLANT
UNIT#
DATE
ZETEC Inc. - 1980
Edition 12.0 Rev 1

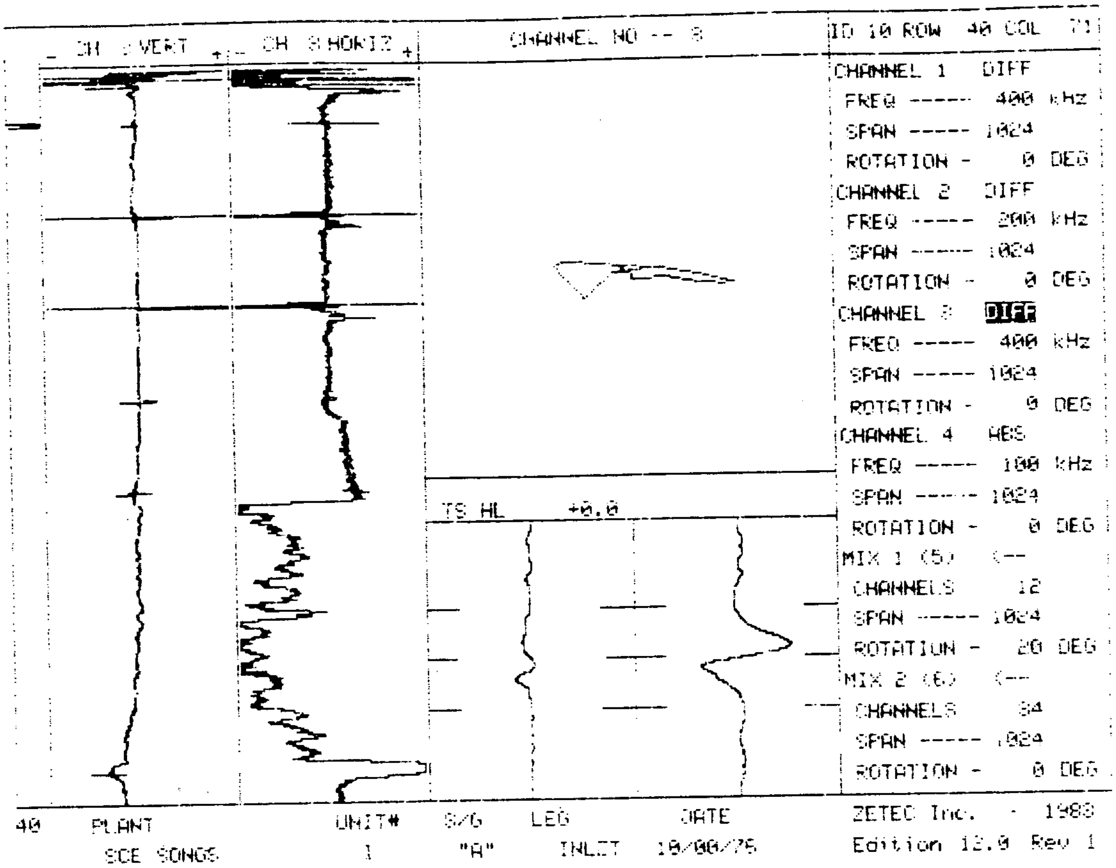


20	PLANT	UNIT#	S/G	LEG	DATE	ZETEC Inc. - 1983
	SCE SONGS	I	"A"	INLET	10/00/76	Edition 12.0 Rev 1

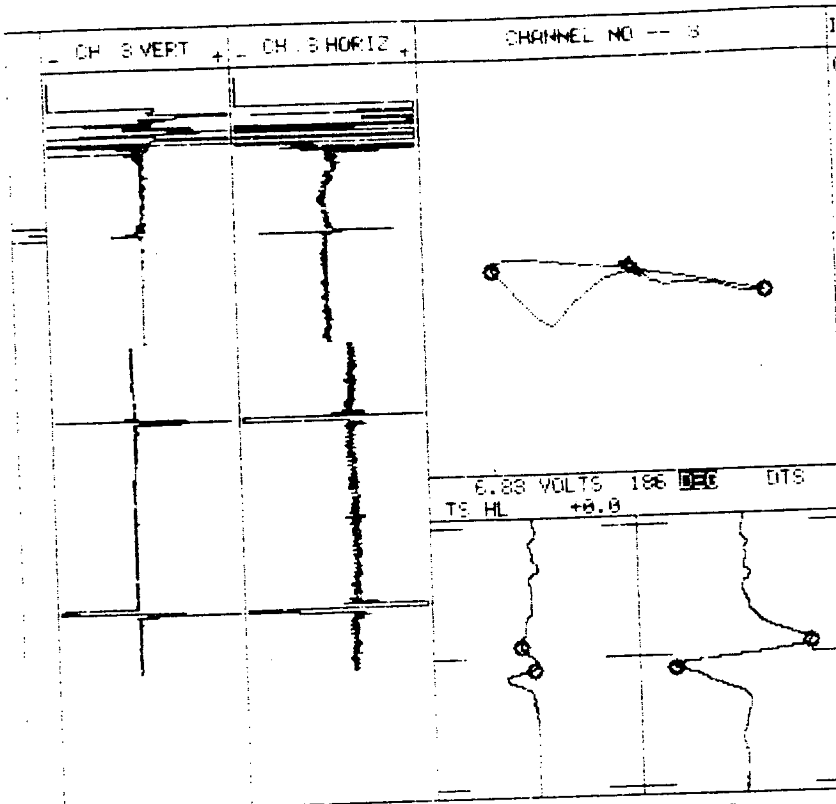


CH 3 VERT
CH 3 HORIZ
CHANNEL NO -- 3
ID 10 ROW 36 COL 71
CHANNEL 1 DIFF
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 200 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 400 kHz
SPAN ----- 1094
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 12
SPAN ----- 1024
ROTATION - 20 DEG
MIX 2 (6) <--
CHANNELS 34
SPAN ----- 1024
ROTATION - 0 DEG
TS HL +0.0
20 PLANT UNIT# S/G LEG DATE
SCE SONGS "I" "A" INLET 09/00/77
ZETEC Inc. - 1983
Edition 12.0 Rev 1


CHANNEL 1
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 340 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNELS
SPAN ----- 1024
CHANNELS
SPAN ----- 1024
PLANT
UNIT#
INLET
DATE
Edition 12.0 Rev 1



CH 2 VERT
CH 3 HORIZ
CHANNEL NO -- 3
ID 10 ROW 40 COL 71
CHANNEL 1 DIFF
FREQ ------ 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 200 kHz
SPAN ------ 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 12
SPAN ----- 1024
ROTATION - 20 DEG
MIX 2 (6) <--
CHANNELS 34
SPAN ----- 1024
ROTATION - 0 DEG
TS HL +0.0
40 PLANT SCE SONGS
UNIT# 1
S/G "A"
LEG INLET
DATE 10/00/75
ZETEC Inc. - 1983
Edition 12.0 Rev 1

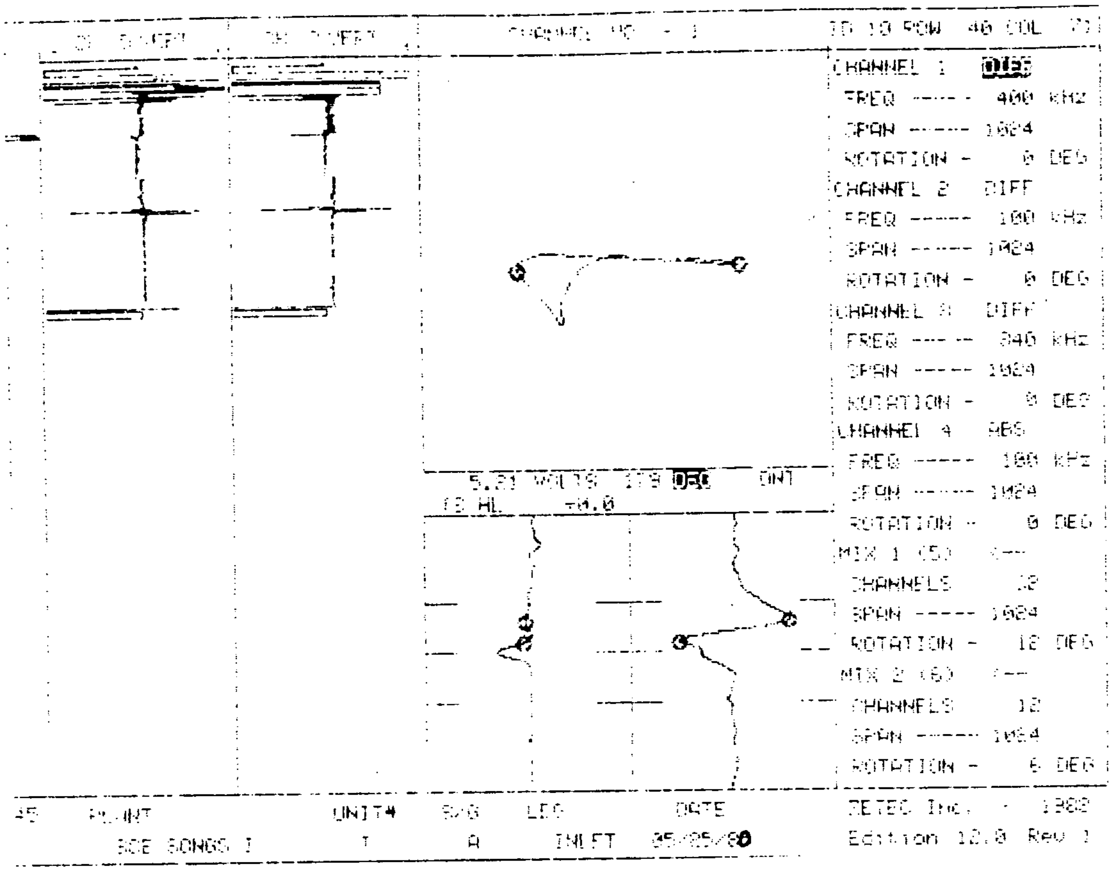


ID 10 ROW 40 COL 71

CHANNEL 1 DIFF
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 200 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 400 kHz
SPAN ----- 1094
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 12
SPAN ----- 1024
ROTATION - 20 DEG
MIX 2 (6) <--
CHANNELS 34
SPAN ----- 1024
ROTATION - 0 DEG

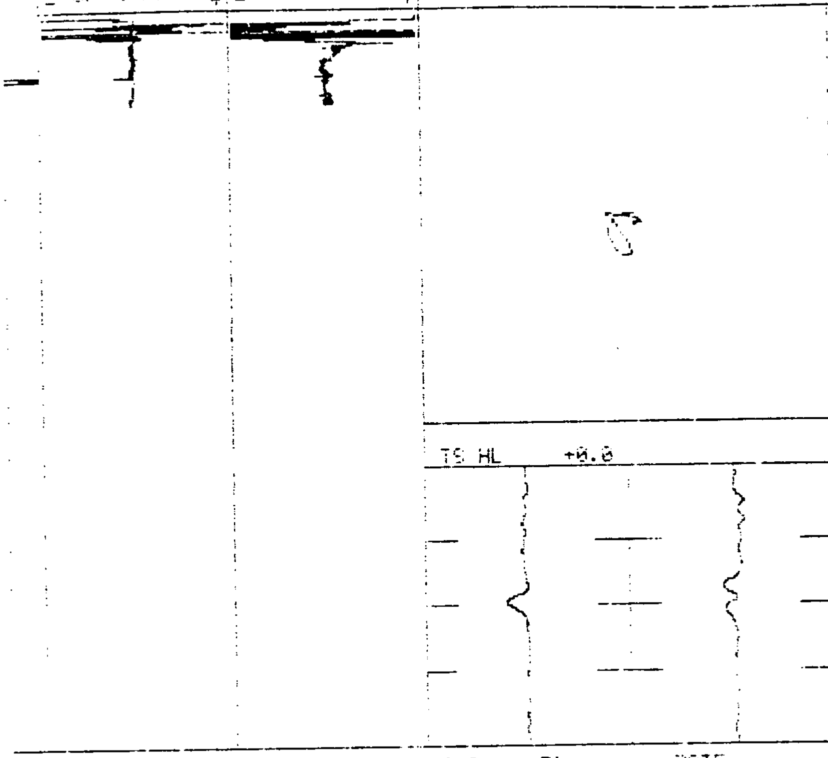
20	PLANT	UNIT#	S/G	LEG	DATE
	SCE SONGS	"I"	"A"	INLET	09/00/77

ZETEC Inc. - 1988
Edition 12.0 Rev 1



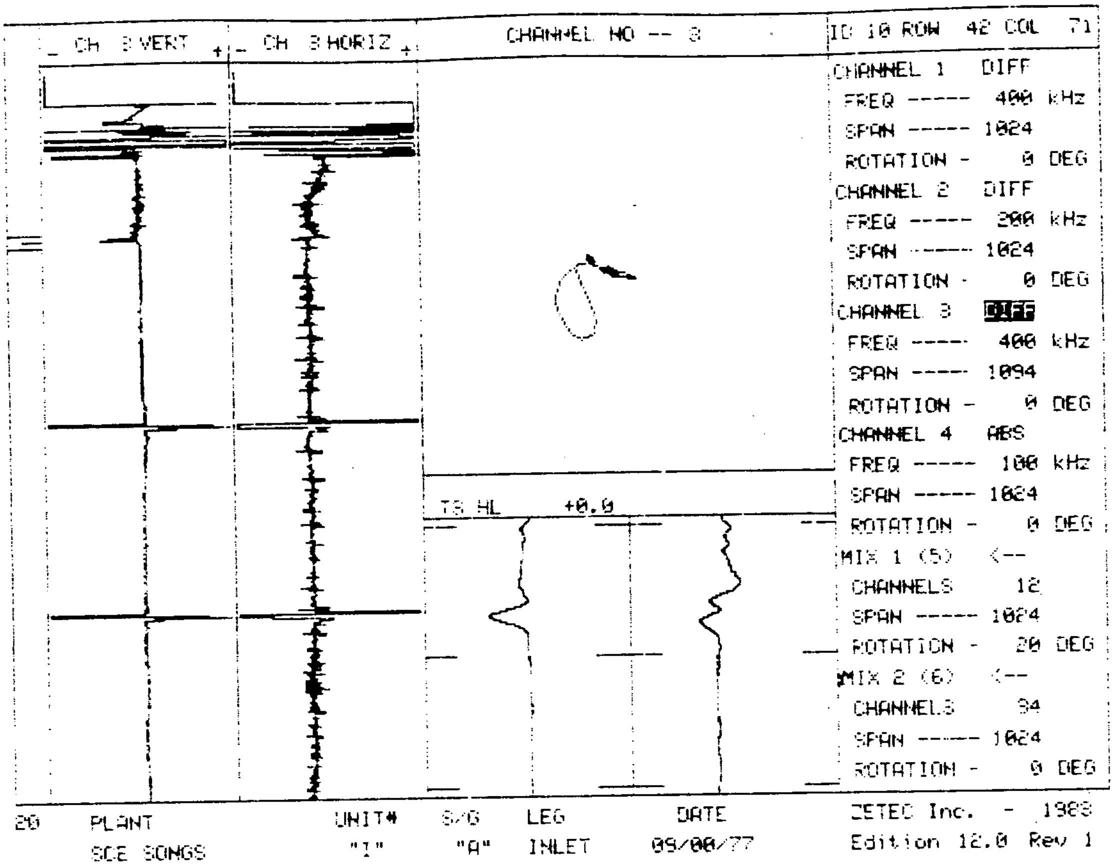
ID 10 ROW 40 COL
CHANNEL 1
FREQ ----- 400 KHZ
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 100 KHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 KHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5)
CHANNELS 12
SPAN ----- 1024
ROTATION - 12 DEG
MIX 2 (6)
CHANNELS 12
SPAN ----- 1024
ROTATION - 6 DEG
5.21 VOLTS
UNIT# S/G LEG DATE
A INLET
Edition 12.0 Rev 1

CH 3 VERT | CH 3 HORIZ | CHANNEL NO -- 3 | ID 10 ROW 42 COL 71

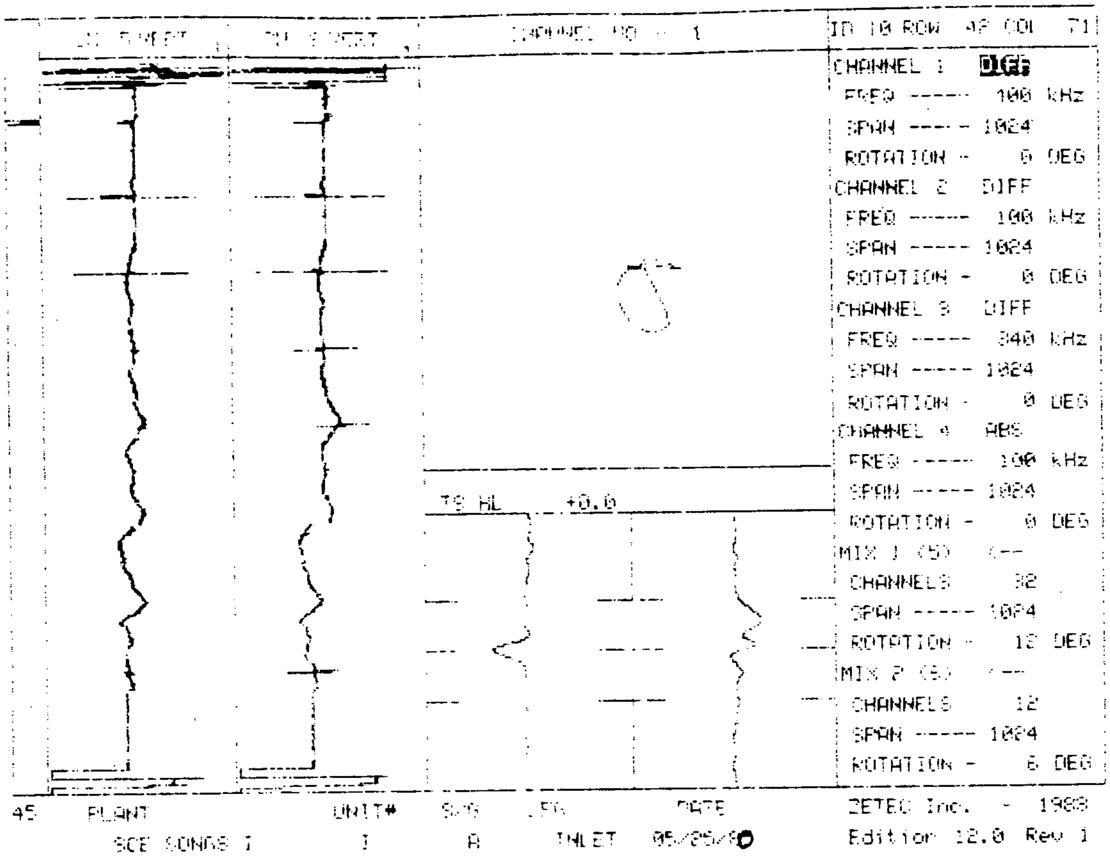


CHANNEL 1 DIFF
FREQ ----- 400 KHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 200 KHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 400 KHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 KHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 12
SPAN ----- 1024
ROTATION - 20 DEG
MIX 2 (6) <--
CHANNELS 34
SPAN ----- 1024
ROTATION - 0 DEG

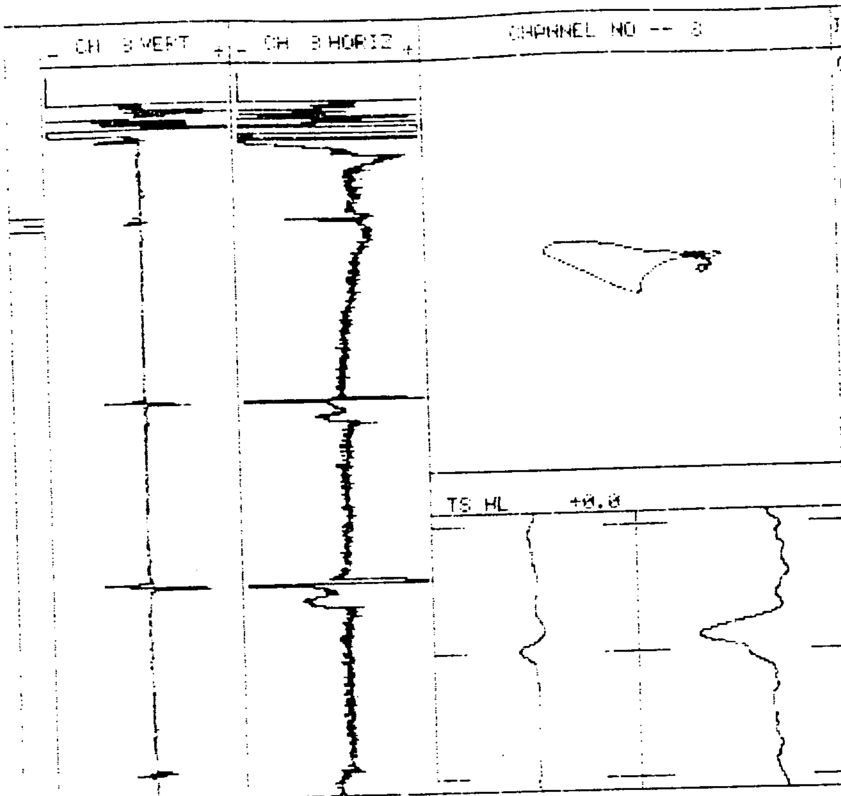
40	PLANT	UNIT#	S/G	LEG	DATE	ZETEC Inc. - 1983
	SCE SONGS	I	"A"	INLET	10/00/75	Edition 12.0 Rev 1



CH 3 VERT
CH 3 HORIZ
CHANNEL NO -- 3
ID 10 ROW 42 COL 71
CHANNEL 1 DIFF
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 200 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 400 kHz
SPAN ----- 1094
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 12
SPAN ----- 1024
ROTATION - 20 DEG
MIX 2 (6) <--
CHANNELS 34
SPAN ----- 1024
ROTATION - 0 DEG
TS HL +0.0
20 PLANT UNIT# S/G LEG DATE
SCE SONGS "I" "A" INLET 09/00/77
ZETEC Inc. - 1983
Edition 12.0 Rev 1



CHANNEL NO - 1
ID 10 ROW COL 71
CHANNEL 1 DIFF
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 340 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNELS 32
SPAN ----- 1024
ROTATION - 12 DEG
CHANNELS 12
SPAN ----- 1024
ROTATION - 6 DEG
TS HL +0.0
45
PLANT
SCE SONGS I
UNIT#
I
A
INLET
DATE
ZETEC Inc. - 1988
Edition 12.0 Rev 1

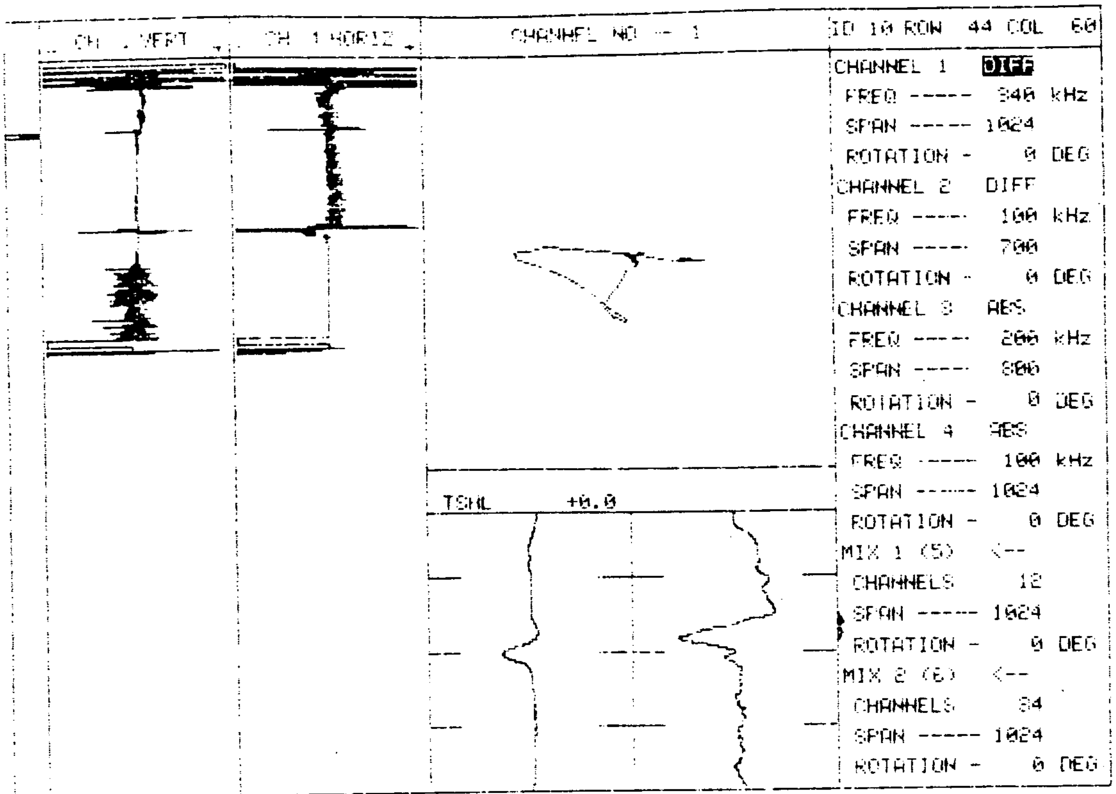


ID 10 ROW 44 COL 60

CHANNEL 1 DIFF
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 2 DIFF
FREQ ----- 200 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 3 DIFF
FREQ ----- 400 kHz
SPAN ----- 1024
ROTATION - 0 DEG
CHANNEL 4 ABS
FREQ ----- 100 kHz
SPAN ----- 1024
ROTATION - 0 DEG
MIX 1 (5) <--
CHANNELS 12
SPAN ----- 1024
ROTATION - 20 DEG
MIX 2 (6) <--
CHANNELS 34
SPAN ----- 1024
ROTATION - 0 DEG

20	PLANT	UNIT#	S/G	LEG	DATE
	SCE SONGS	I	"A"	INLET	10/00/76

ZETEC Inc. - 1983
Edition 12.0 Rev 1



PLANT	UNIT#	S/G	LEG	DATE	ZETEC Inc. - 1983
SCE SONGS I	I	A	INLET	03/31/82	Edition 12.0 Rev 1