400 V 3 PH 50 ~ SUPPLIES PROVIDED BY THE N.Z.P.O.

RECT. Nº1 SEE NOTE 4

RECT. Nº2 SEE NOTE 4

RECT. Nº3 SEE NOTE 4

SEE NOTE 4

MAIN 50V LOAD BUS BAR

EMERGENCY LIGHTING (CABLED BY N.Z.P.O.)

SPARE

7/-064 8 BATT BAR OF ALARM FUSES (FIG 1)

V1, FIG 2.

EXCH LOAD AMMETER SHUNT

EXCHANGE LOAD

MAIN BATTERY Nº1

MAIN BATTERY Nº2

24 OR 25 AS SPECD

EXCHANGE DISTRIBUTION

M.D.F. EARTH BAR (CONN PROVIDED BY N.Z.P.O.)

POSITIVE BATTERY (WHEN REQUIRED)

50V POS

AER

V4 FIG 2

250 V 1PH 50~ PROVIDED BY THE N.Z.P.O.

POS BATT TRICKLE CHARGE RECTIFIER (WHEN REQUIRED) COMPLETE WITH:- OUTPUT AMMETER INPUT & OUTPUT FUSES. INPUT SWITCH

BATT 1 & BATT 2 SWITCHES ARE MECHANICALLY INTERLOCKED SO THAT IT IS IMPOSSIBLE FOR BOTH TO BE REMOVED FROM THE FLOAT POSITION. ALL AUXILIARY CONTACTS ARE MICROSWITCHES, EXCEPT THE 6V. TAP AUXILIARIES WHICH ARE APPROPRIATELY RATED

6V DC STANDBY TO ANS LAMP RACKS WHEN REQUIRED

7/-064 8 MAIN 50V LOAD BUS BAR IN POWER CONTROL CUBICLE

FS1 0·5A RELAY FA
FS2 1·5A SWITCH POSN. LAMPS
FS3 1·5A ALARM LAMPS
FS4 1·5A RELAYS
FS5 5·0A BATT JACKS
FS6 1·5A VRI COIL
FS7 1·0A RECTS (BOOST RELAYS)
FS8
FS9
FS10
FS11 0·5A

SEE ETH RUNS

AUX ETH STRIP

PART OF POWER CIRCUIT
EXPLANATORY ONLY

SEPARATE PAIR TO EACH RECTIFIER

FFA 2

FIG 2 VOLTMETER SWITCHING SEQUENCE AS SEEN FROM REAR OF SWITCH

REF	DESIGNATION
V1	EXCH/JE
V2	BAT"
V3	BA" L
V4	PO. ATT
V5	6V TAP

POWER CIRCUIT

TEST POS. BATT. ALM (KAT) / 2 + RESET POS. BATT. ALM (KRB) / 2

FIG 3

POS BATT ALM (WHEN REQUIRED)

KAT2 KRB2 KAT1 KRB1 R26 1·15K LP20 2/6V RED POS BATT ALARM

BATT EARTH } SEE FIG 1.

TO POS. BATT. DISTRIBUTION AND ALARM CIRCUIT GBW 15340 FIG 6 OR EQUIV

SCA19 PROMPT
SCA20 DEFFERRED
ALARM CLASSIFICATION STRIP CONNEXION

KRA1 RA1 RA2 - RA3 - LP19a - KRA1 RA RI9 1·5K REC ATT'N LP19 2/6V GREEN

CABLED BY N.Z.P.O. TO AUTO START CCT OR MAINS FAIL UNIT.

CABLED BY N.Z.P.O. TO THEIR ENGINE ALT'R AUTO START CIRCUIT WHERE PROVIDED

SCA11 - SCA12 - SCA13 - SCA14 - SCA15 - SCA16 - SCA17 - SCA18 - SCA19

SCA1 SCA16 SCA21 SCA17 SCA22 SCA18

SCA15 - SCA17 - SCA18 - HVB25 R-0

HVB6

TEST HIGH VOLTS (KHV) / 2 + HIGH VOLTS RESET (KHR) / 2

KHV2 KHR2

RECEIVING ATTENTION (KRA) / 2

TEST CHARGE FAIL & LOW VOLTS (KLV) / 2

KRA2 KLV2

KHV1 KLV1 R20 R21 R22 R23 R24 RV1 LV2 LV3 HVB3 HVB4 HVB5 HVB6 THI HVA1 KHR1 TH VR1 SEE NOTES 1 & 2 RX1 RX2 HVA HVB CF C1 R25 JKA JKB

BATT. BK. FS1 — FA6
BATT. BK. FS2 — R1b - R6b - R4b - R9b - R5b - R10b - R2b - R7b - R3b - R8b
BATT. BK. FS3 — R14b - R16b - R17b - R18b - R19b - R11b - R12b - R13b - R15b - (R26b FIG 3)
BATT. BK. FS4 — R25b - R4c - FFA6 - MF6 - ER6 - CF6 - EF6 - LV6 - TH23 - HVA6 - HVB6 - CRX2b - CRX1b
BATT. BK. FS5 — JKA1 - JKB1
BATT. BK. FS6 — R24B
BATT. BK. FS7 — TERML BR1 ON MAIN RECTS VIA KNIFE SWITCH AUXILIARY CONTACTS

EARTH. R.AUX.ETH.STRIP — FA6
EARTH. R.AUX.ETH.STRIP — LP1 - 10 - 1 KNIFE SWITCH AUXILIARY CONTACTS
EARTH. R.AUX.ETH.STRIP — R20a - FFA2 - FFA1a - FFA1 - FA1 - ER1 - ER3 - MF2 - MF1 - EF2 - EF1 - CF2 - LV2 - LV1 - LV4 - HVB2b - HVB1 - HVB3 - HVA1 - KHR2 - KRA2 - (KRB2 FIG 3)

EARTH. R.AUX.ETH.STRIP — JKA2 - JKB2
EARTH. R.AUX.ETH.STRIP — VR1/2

TO AUXILIARY CONTACTS ON KNIFE SWITCHES

RECT 1 FLOAT RECT 2 FLOAT RECT 3 FLOAT BATT 1 FLOAT BATT 2 FLOAT RECT 1 CHARGE RECT 2 CHARGE RECT 3 CHARGE BATT 1 CHARGE BATT 2 CHARGE

LP1 LP2 LP3 LP4 LP5 LP6 LP7 LP8 LP9 LP10 2/6 V YELLOW

RI1 RI2 RI3 RI4 RI5 RI6 RI7 RI8 RI9 RI10 1·5K

LP11 7/6 V RED — R-B-G
LP12 HIGH 2&V VOLTS RED — R-BN
LP13 LOW 2&V VOLTS RED — R-O
LP14 FUSE 2&V RED — R-B
LP15 FILTER FUSE & ALARM 2&V RED — R-G
LP16 CHARGE FAIL 2&V RED — R-BN
LP17 ENGINE ALT'R RUN 2&V RED — R-BK
LP18 ENGINE ALT'R FAIL 2&V RED — R-B-W
LP19 MAINS SUPPLY FAIL 2&V RED — R-B-O
LP20 POS BATT ALARM 2&V RED — R-B-S

NOTES

1 FOR CIRCUIT EXPLANATORY AND CONTACT VOLTMETER SETTINGS & ADJUSTMENTS SEE NOTES PR 2226 & DWG. 26140.

2 VR1 IS SHOWN IN THE NORMAL (FLOAT VOLTAGE) POSITION.

3 6V. TAP & ASSOCIATED AUXILIARY CONTACTS ON BATTERY SWITCHES ARE ONLY REQUIRED FOR EXCHANGES EQUIPPED WITH TOLL SWITCHBOARD.

4 THE INTERNAL CIRCUITRY OF THE MAIN RECTIFIERS IS SHOWN ONLY SO FAR AS TO ILLUSTRATE THE FUNCTION OF EXTERNAL CONTROLS & ALARMS. THE CONTENTS SHOWN ARE BASED ON ISSUE B OF N.Z.P.O. DRAWING 32920.

5 THIS PLANT IS DESIGNED FOR USE IN GEOTHERMAL AREAS.

FIG. 1. CONTROLS & SUPERVISORY

NOTES AMENDED, TITLE CHANGED (936001)	4		
REFS. & CHANGED CIRCUIT NUMBERS CHANGED (29357)	3	30.8.60	LEB
REFS. & CHANGED CIRCUIT NUMBERS AMENDED (28956)	2	21.6.60	LEB
AMENDMENT PARTICULARS		DATE	APP'D

ORIGIN: E+M (POW)
DRAWN
CHECKED
WIRING
CIRCUIT
N.Z.P.O.

GBW 19300

DC POWER PLANT CONTROL CUBICLE (N.Z.P.O. TYPE, E.M.I.)

SIZE XL 50V I.E.

1 OF 1

0 5 Centimetres 10 15 20 25 30 35 40 45 50 55 60