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GEMINI PROGRAM MISSION REPORT

GT-3

GEMINI 3

(U)

SUPPLEMENTAL REPORT 5

AIR-TO-GROUND VOICE TRANSCRIPTION

JUNE 23, 1965

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION ☐ MANNED SPACECRAFT CENTER

[redacted]

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GEMINI PROGRAM MISSION REPORT GT-3

GEMINI 3

SUPPLEMENTAL REPORT 5

AIR-TO-GROUND VOICE TRANSCRIPTION

Prepared by: Gemini Mission Evaluation Team

Authorized for Distribution:

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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT CENTER

HOUSTON, TEXAS

June 23, 1965

[redacted]

[redacted]

GT-3 COMMUNICATIONS TRANSCRIPT

The transcription of GT-3 air-to-ground voice communications was derived from ground station voice recorder tapes.

The following is a breakdown of the format of the transcription:

a. Column 1 – Elapsed time from launch in hours, minutes, and seconds.

b. Column 2 – Communicator, identified as follows:

C – Command Pilot
P – Pilot
CC – Capsule Communicator
RA – Recovery Aircraft
RS – Recovery Ship

c. Column 3 – Text of communication.

Within the text, a series of three dots (. . .) indicates the transmission could not be deciphered. Two dashes (– –) indicate a time pause and/or a change in thought. Parentheses are used to designate information not a part of the communications, but included to clarify certain communications.

For ease of reference, the station in contact with the spacecraft is designated at the initiation of communications. At the top right-hand corner of each page is shown the station (s) in contact and the pass number or mission phase.

[redacted]

[redacted]

CAPE KENNEDY

10, 9, 8, 7, 6, 5, 4, 3, 2, 1, 0

00 00 00	CC	Bolts and lift-off.
00 00 02	C	Roger. Clock is started.
00 00 12	C	There's the roll program.
00 00 13	CC	Roger. Roll.
00 00 22	C	Okay. Roll is completed.
00 00 23	CC	Roger. Roll complete.
00 00 25	C	There goes the pitch.
00 00 26	CC	Roger. Pitch. You're on your way, Molly Brown.
00 00 29	C	Roger.
00 00 50	CC	Plus 50 seconds.
00 00 52	C	Roger. Mode II delay.
00 00 55	CC	Roger.
00 00 56	P	Cabin pressure is holding at 6.0, climbing just a little.
00 00 59	CC	Roger.
00 01 18	C	It just got quiet.
00 01 21	CC	Roger.
00 01 29	P	Cabin pressure relieving at 6.5.
00 01 41	CC	1 + 40.
00 01 43	C	Roger. Mode II.
00 01 44	CC	Roger.

[redacted]

00 01 48	P	First DCS update received.
00 01 53	CC	Roger. Update.
00 02 02	CC	You're a little bit high on the flight path, but no problem, Molly Brown.
00 02 05	C	Okay, Molly Brown's GO for staging.
00 02 07	CC	Roger. Looks good from here.
00 02 09	C	Roger.
00 02 28	P	Second update received.
00 02 29	CC	Roger. Update.
00 02 35	C	Okay, there was staging.
00 02 37	CC	Roger. Stage.
00 02 39	C	And, we're thrusting.
00 02 41	CC	Okay. Thrust looks good from here.
00 02 51	P	FDI shows full scale pitch attitude error.
00 02 53	C	Okay. We're starting to steer.
00 02 58	C	Horizon comes right into view.
00 03 00	CC	Roger.
00 03 02	P	RGS is GO!
00 03 04	CC	Looks good from here.
00 03 05	C	Look at the horizon.
00 03 07	CC	Steering is good from here.
00 03 31	C	We're moving right along the horizon.
00 03 33	CC	Roger.

[redacted]

MCC-Launch

00 04 18	CC	Roger. Molly Brown, you're GO from here.
00 04 21	C	Roger. Molly Brown is GO.
00 04 22	CC	Roger.
00 04 48	CC	Steering right down the line.
00 04 50	C	Okay.
00 04 56	C	You can see the view real well. The nose dropped below the horizon a little bit. Now it's back up above.
00 05 04	CC	Roger. Stand by for my mark on 0.8.
00 05 06	C	Roger.
00 05 09	CC	MARK 0.8.
00 05 10	C	Good show.
00 05 11	CC	Roger.
00 05 26	CC	Looks good.
00 05 34	C	SECO.
00 05 36	CC	Roger. Showing a good one here.
00 05 55	CC	Roger. You are GO, Molly Brown.
00 05 59	C	1 7
00 06 06	CC	Roger.
00 06 10	C	Okay. We are separated.
00 06 15	CC	Roger. Fairings.
00 06 21	C	There went all fairings.
00 06 22	CC	Okay, fine.
00 06 24	CC	You have the IVI's?

[redacted]

00 06 29	C	Okay. 17 ft/sec at SECO, and I have 29 ft/sec now.
00 06 37	CC	Roger.
00 06 42	C	And 3 down, 7 right.
00 06 47	CC	Roger. 3 down, 7 right.
00 06 49	C	And 29 aft.
00 06 50	CC	And 29 aft. Okay.
00 06 54	P	And the attitude on the ball is 18° nose down.
00 07 23	CC	Roger. We have an 87 by 125 orbit, Molly Brown.
00 07 40	CC	Molly Brown, Cape Cap Com.
00 07 43	CC	Roger. You have an 87 by 125 orbit. I'll get you 1α shortly.
00 07 45	C	Roger.
00 07 54	CC	Roger. New 1α time is elapsed time of 18:12. 18 minutes, 12 seconds.
00 08 05	C	Roger, 18:12.
00 08 06	CC	Roger.
00 08 39	C	That horizon is right where they said it would be.
00 08 43	P	Yes.

CANARY ISLANDS

00 15 16	CC	Molly Brown, Canary Cap Com. How do you read?
00 15 19	C	Canary Cap Com, this is Molly Brown. How do you read?
00 15 22	CC	Roger. Read you loud and clear, Molly Brown.
00 15 27	C	I read you the same.

CYI-1

00 15 28	CC	We have your TM solid and all systems look good on the ground.
00 15 31	C	Okay, we look pretty good up here.
00 15 32	CC	I have your 2-1 time if you are ready to copy. Do you copy, Molly Brown?
00 15 38	P	Okay.
00 15 40	C	Okay. Ready with 2-1.
00 15 41	CC	Roger. ΔV 139. GMTRC 15 55 47. GETRC 01 31 47. Roll left 55°. GMTRB 16 05 31. Roll right 65. Did you copy?
00 16 21	P	Roger.
00 16 25	CC	Molly Brown, Canary Cap Com.
00 16 28	C	We're getting ready to read them back to you.
00 16 29	CC	Roger.
00 16 30	P	Roger. ΔV of 139. GMT of 16-belay that – 15 55 47.
00 16 39	CC	Molly Brown, Canary Cap Com. Request you place your radiator switch to the FLOW position.
00 16 45	P	Roger. Radiator is in FLOW position. Has been the whole pass.
00 17 00	P	Reading back a GMT of 2-1 -- 15 55 47 GMTRC. GMTRB is 16 05 31. Bank angle 55° left and right 65°.
00 17 30	CC	Molly Brown, Canary Cap Com. We are standing by for your UHF Com Check. Do you copy?
00 17 35	P	Roger. We are on UHF 2. Have been the whole pass. Over. (Pilot was in RECORD on no. 2 audio and therefore not transmitting).
00 17 49	CC	Molly Brown, Canary Cap Com.
00 17 51	C	Go ahead.

00 17 51	P	I don't think they read me.
00 17 52	CC	Roger. We are standing by for your UHF Com Check, and would you place your radiator switch to your FLOW position?
00 17 59	C	Roger. John has been answering all of those. He's just in RECORD.
		(Pilot switched to transmit)
00 18 03	P	Roger. The radiator has been in FLOW the whole pass. The UHF has been on no. 2 the whole pass. Over.
00 18 14	CC	Roger. Copy you loud and clear, Molly Brown. We are standing by for your blood pressure.
00 18 20	P	Roger. Blood pressure is coming down.
00 18 32	CC	Molly Brown, Canary Cap Com. Be advised, on your 15 second burn you achieved 12.6 ft/sec. Did you copy?
00 18 41	C	Roger. Understand. I seem to have a leak. There must be a leak in one of the thrusters, because I get a continuous yaw left.
00 18 53	CC	Roger. Understand that you get a continuous yaw left.
00 18 57	C	Very slight. Very slow drift.
00 18 59	CC	Roger.
00 19 13	CC	Molly Brown, Canary Cap Com. I have your radiator temperatures, if you are ready to copy.
00 19 19	C	Roger.
00 19 20	CC	Roger. Your radiator outlet temperature if off-scale high. Your radiator inlet is 74.
00 19 30	C	Roger. Off-scale high. Going back to BY-PASS on radiator.
00 19 33	CC	Roger. Understand.

00 19 47	CC	Molly Brown, Canary Cap Com. Stand by to start your clock at 20 minutes ground elapsed time. On my mark.
00 20 00	CC	MARK! Did you copy, Molly Brown?
00 20 04	C	Roger. I copied, and sea urchin eggs activated.
00 20 08	CC	Roger.
00 20 12	CC	Be advised we have received your blood pressure, Molly Brown.
00 20 16	C	Roger.
00 20 18	C	Radiator outlet temperature is off-scale high and Greenwich mean time is 1445.
00 20 34	C	Rate command looks good.
00 20 48	C	Okay. The control checks are completed.
00 20 55	C	Do you still read, Canaries?
00 20 58	CC	Molly Brown, Canary Cap Com.
00 21 00	C	Roger. Control checks are completed and insertion checklist is completed too.
00 21 04	CC	Roger. Understand.
00 21 07	CC	I've been advised from the Cape you might put your prop switch off and recycle a couple of times, and it might stop your leak.
00 21 17	P	It's not leaking.
00 21 18	CC	Did you copy, Molly Brown?
00 21 20	C	I copied.
00 21 38	CC	Molly Brown, Canary Cap Com. Do you copy?
00 21 41	C	Say again.
00 21 43	CC	Roger. Can we have your sea urchin egg time again, please?

[redacted]

00 21 46	C	Roger. 20 minutes elapsed.
00 21 48	CC	Roger. Understand.

KANO

00 25 07	CC	Molly Brown, Cape Cap Com.
00 25 10	P	How's that circuit breaker set-up up there?
00 25 20	CC	Molly Brown, Cape Cap Com.
00 25 20	C	. . .
00 25 22	P	Yep.
00 25 40	CC	Molly Brown, Cape Cap Com.
00 25 43	C	Cape Cap Com, Molly Brown here.
00 25 46	CC	Roger. How's your status on that thruster?
00 25 50	C	It's still GO. We're still drifting a little bit, Gordo. It's not bad. I can hold it with Pulse with no problem. But we did lose our primary dc-dc converter.
00 26 02	CC	Roger. Lost your primary dc-dc.
00 26 05	C	Roger.
00 26 07	CC	Roger.
00 26 14	C	That must not have been the scanner problem though.
00 26 17	CC	Have you tried your circuit breaker, Gus, on that?
00 26 22	C	Yes, we have.
00 26 29	CC	Molly Brown, have you tried your circuit breaker to cut off that one erratic thruster.
00 26 33	C	Negative.

[redacted]

TAN-1
CSQ-1

TANANARIVE

00 35 08	CC	Molly Brown, Cape Cap Com.
00 35 24	CC	Molly Brown, Cape Cap Com.
00 35 27	C	I read you okay, Gordo. How do you read Molly Brown?
00 35 29	CC	Roger. How's your control system?
00 35 36	C	Cape Cap Com. How do you read Molly Brown?
00 35 38	CC	I'm reading you weak but readable.
00 35 45	C	Yes, you are almost unreadable.
00 35 52	CC	Say again, Molly Brown.
00 36 06	C	I said I can read you, Gordo.
00 36 09	CC	Roger, I'm barely reading you also.
00 36 18	CC	How – is – your – control – system? Over.

(Spacecraft did not read question)

COASTAL SENTRY QUEBEC

00 42 27	CC	Molly Brown, Molly Brown, CSQ Cap Com.
00 42 31	C	CSQ, this is Molly Brown.
00 42 34	CC	Roger. How is your control system working?
00 42 38	C	The control system is working fine. It's just that I have a very slight yaw to the left.
00 42 47	CC	Molly Brown, I copy you very weak. Would you say again?
00 42 51	C	All the control system is working fine. We just have a very slight drift to the left.
00 42 58	CC	Roger. Understand. Would you confirm that you are on secondary dc-to-dc converter?

[redacted]

00 43 11	C	Affirmative.
00 43 15	CC	Are you on secondary ACME yaw logic?
00 43 20	C	Negative.
00 43 22	C	Should we try that?
00 43 25	P	Yes.
00 43 32	CC	Molly Brown, CSQ Cap Com. Are you in the FLOW position on the radiator?
00 43 40	C	Radiator is in FLOW position. We're trying secondary ACME yaw logic now.
00 43 46	CC	Roger.
00 45 05	CC	Roger. Cape recommends that you place the driver switch to SECONDARY.
00 45 13	C	Roger.
00 45 18	CC	Molly Brown, CSQ Cap Com.
00 45 23	C	Go ahead, CSQ.
00 45 24	CC	Your inlet temp: 76°. Your outlet temp: 42°.
00 45 32	C	Roger.
00 45 40	P	We'll stay in FLOW.
00 45 54	C	That secondary driver may have stopped the drift.
00 46 12	CC	Molly Brown, CSQ
00 46 14	C	Go ahead.
00 46 15	CC	We have not received a blood pressure or an oral temp.
00 46 19	C	Roger. I told you the blood pressure bulb won't fit in the hole anymore. I think the "O" Ring is jammed, or something.

CSQ-1
CRO-1

00 46 29	CC	Roger. We're standing by for respiratory maneuver.
00 46 38	C	Okay. Here it comes.
00 46 52	C	Okay. No. 2 audio in UHF and TM CALIBRATE --
00 46 55	CC	Molly Brown, CSQ. Stand by for a BMT time back.
00 47 00	C	Roger.
00 47 01	CC	On my mark GMT will be 15 11 10.
00 47 10	CC	MARK!
00 47 14	CC	Molly Brown, CSQ.
00 47 15	C	Roger, your mark. My watch is 10 seconds fast.
00 47 17	CC	Roger.
00 47 51	C	Have you received oral temp yet?
00 47 54	CC	Molly Brown, CSQ.
00 47 59	C	Go ahead, CSQ.
00 48 01	CC	We copied your respiratory maneuver, and we have your oral temp. All systems appear GO from the ground.

CARNARVON

00 50 27	CC	Molly Brown, Molly Brown, Carnarvon Cap Com. How do you read?
00 50 31	C	Loud and clear.
00 50 33	CC	Roger. Read you the same. Could you give us your status please? And the Cape would like to know if any of the remedies helped your yaw problem.
00 50 43	C	No. None of the remedies helped and we are GO.

[redacted]

00 50 46	CC	Okay. You have a GO from down here for the second orbit, and, if you'll stand by, I'll send you a 2-1 T_R and a Gemini load.
00 50 58	C	Roger.
00 51 00	CC	Stand by for T_R.
00 51 03	C	You ready?
00 51 04	P	Yes.
00 51 12	CC	Okay, Molly Brown. We got your Gemini load. We could not get T_R in. We got a spacecraft reject on T_R, and it did go in at this time. I'd like to give you a hack on T_R at 39:30, in about 10 seconds.
00 51 52	CC	Molly Brown, stand by on my mark.
00 51 53	CC	MARK! 39:30 is your T_R. Your T_R clock is synched with all on the ground, and your spacecraft elapsed time is synched
00 52 05	P	Okay. We have computer time of 39:28. That's close enough.
00 52 07	C	Roger, and I believe I see a light from Perth.
00 52 11	CC	Roger. I understand you see light from Perth. We'll have a radiator status for you in a minute, and anytime you can give your GMT for your experiment, I'd appreciate it.
00 52 23	C	The elapsed time of the blood experiment was 50 minutes and 18 seconds. That was elapsed time.
00 52 31	CC	Roger. 50 minutes and 18 seconds. Your radiator - in is 73, your radiator -out is 38. You're looking pretty good.
00 52 38	C	Roger.
00 52 40	CC	And if John is ready to copy any of this maneuver load, I have it for you.

CRO-1
CTN-1

00 52 45	C	He's ready to copy.
00 52 47	CC	Okay. GMTB 15 43 23. ΔV of 139. Duration of burn - 2 minutes 39 seconds. Your GMTRC 15 55 24. Roll left 55. GMTRB 16 05 28. Roll right 65. GMT 400 K 15 58 23. Your maneuver load: 6344257, 0444775, 0533348, 664903.3, 676628.4, 082244.4, 09120.50, 10031.38, 11302.00.
00 54 28	P	Roger. Copied your parameters. Over.
00 54 32	CC	Molly Brown, Carnarvon here. You can go secondary coolant loop OFF, and you can go evaporator to NORMAL.
00 54 40	C	Roger. Secondary coolant loop OFF and evaporator to NORMAL.
00 55 22	CC	Molly Brown, Carnarvon Cap Com.
00 55 24	C	Go ahead.
00 55 26	CC	Roger. Your Texas burn will be 48 ft/sec for 73 seconds.
00 55 37	C	Okay, 48 ft/sec for 73 seconds.
00 55 40	CC	That's affirmative. We got your T_R and Gemini load in. Your clocks look good on the ground, and everything is GO here. See you next trip.
00 55 50	C	Roger.

CANTON

01 11 32	CC	Molly Brown, Cape Cap Com.
01 11 39	C	Cape Cap Com, Molly Brown. Go ahead.
01 11 42	CC	Roger, Molly Brown, Cape Cap Com. We're going to have you leave your propellant switch on and do the Texas burn, and we will watch your fuel usage then across the States. If it continues, we'll request you

turn your propellant switches off when you're over the Cape next time, except, of course, when you need to use the fuel.

01 12 07	C	Leave the propellant switch on for the Texas burn, and then watch for leakage?
01 12 12	CC	Roger. Leave it on till after the Texas burn, and then we will watch your leakage. If it continues to leak, we will request you turn them off over the Cape.
01 12 22	C	Roger. We do not read that we're using any fuel.
01 12 26	CC	Okay, fine. We are not overly concerned. It's just that we'd like to get a handle on what is causing it here.
01 12 34	CC	Your O_2 pressure is off the scale on the high side by telemetry.
01 12 46	P	Say again, Gordo.
01 12 47	CC	Your oxygen pressure, your O_2 pressure, is off the high side of the scale. You may have had that switch failure in there. You may have had a telemetry failure in there that failed to the high side.
01 12 57	P	Roger. We'll go to High Rate and see if it comes down, Gordo.
01 13 07	C	Roger, and, Gordo, we have lost our primary scanners.
01 13 17	CC	Roger. Did you say primary scanners?
01 13 21	C	Affirmative.
01 13 25	CC	Okay. Can you give us a helium source pressure?
01 13 32	C	Say again.
01 13 33	CC	What is your helium source pressure?
01 13 40	P	Roger. It's 2350, Gordo.

RKV-1

ROSE KNOT VICTOR

01 23 38	CC	Molly Brown, Molly Brown, RKV.
01 23 40	C	RKV, this is Molly Brown.
01 23 42	CC	Roger. Read you loud and clear. I'm going to update your T_R and transmit a maneuver load to you.
01 23 49	C	Roger.
01 23 54	CC	I've got a reject on my T_R. What is your status, Molly Brown?
01 23 59	C	Our status is GO. We did bring the ECS O_2 back down on the scale with O_2 high rate, and since that time it has returned to off-scale.
01 24 10	CC	Roger, and I have transmitted a T_R and Gemini load for your maneuver over Corpus. Confirm you were in CATCH-UP. Over.
01 24 20	C	Negative. We're in CATCH-UP, now.
01 24 21	CC	Roger. I'll retransmit the load.
01 24 26	CC	Roger. You have a load in the CATCH-UP for your maneuver.
01 24 26	C	Got to be in CATCH-UP.
01 24 28	P	Okay. There you go.
01 24 29	C	Roger. Go.
01 24 30	CC	You are GO for the next orbit.
01 24 33	C	Roger. Thank you.
01 24 34	CC	Are you ready to copy your maneuver times?
01 24 38	C	Stand by.
01 24 39	CC	Roger.

[redacted]

01 24 39	C	You ready?
01 24 42	P	Yes.
01 24 43	C	Okay. We're ready to copy.
01 24 45	CC	Roger. Your GMTB . . . correction, 15 57 00. Your ground elapsed time to burn, 01 33 00. Your ΔV of the burn, 048. Your length of burn, 01:14.
01 24 46	P	Roger. We copied 15:57, 01:33, 48 ft/sec, at a minute and 14 seconds.
01 25-14	P	74 seconds.
01 25 31	CC	Roger. Stand by for a g.e.t. time hack.
01 25 36	CC	On my mark, it'll be 85 minutes and 45 seconds. Stand by.
01 25 45	CC	MARK! You copied?
01 25 46	C	Roger. We copied.
01 25 49	CC	Roger. Your clocks looked good on the ground.
01 25 52	CC	Will you give me a readout of core 25, 26, and 27? Over.
01 26 15	P	26 and 27 are all zeros.
01 26 31	CC	Molly Brown, RKV Cap Com.
01 26 40	C	Go ahead, RKV.
01 26 42	CC	Will you give me a readout of your computer core -- 25, 26, and 27, please?
01 26 48	P	Roger. It was: 25 was minus 0480. 26 and 27 were all zeros. Over.
01 27 01	CC	That is affirmative. I concur.
01 27 22	CC	Molly Brown, can you give me a readout of your OAMS helium source pressure, temperature, and your propellant quantity gage?

[redacted]

RKV-1
GYM-1

01 27 31	C	The propellant quantity gage is 83 percent. Stand by. John will give you the other.
01 27 35	P	Roger. Source pressure is 2450. Source temperature is 85°, and fuel and oxidizer regulated at 295 with 68°.
01 27 50	CC	Roger. 295 at 68. Say again your propellant quantity, Command Pilot.
01 27 55	C	Propellant quantity is 84 percent.
01 27 58	CC	Roger. I copy.
01 28 10	CC	Molly Brown, RKV standing by. Do you have anything else?
01 28 13	C	Roger. We're in good shape.
01 28 15	CC	Roger.
01 28 24	CC	Molly Brown, RKV. I'm getting an indication of OAMS thrust forward-firing. I have negative OAMS yaw firing on the ground.
01 28 32	C	We're not doing any firing. We're not even in MANEUVER and ATTITUDE and we haven't touched the handle. (Weak signals at LOS)
01 28 38	CC	Roger.
01 28 58	CC	Molly Brown, stand by for Guaymas.
01 29 00	C	Roger.

GUAYMAS

01 29 43	CC	Molly Brown, Guaymas Cap Com.
01 29 45	C	Guaymas, Molly Brown.
01 29 46	CC	Guaymas standing by.

01 29 49 C Roger.

TEXAS

01 31 10 CC Molly Brown, Texas Cap Com.

01 31 12 C Read you loud and clear, Texas.

01 31 14 CC Roger. Texas standing by for your maneuver.

01 31 15 C Roger.

01 31 45 C You got that? The IVI's came out 50 ft/sec aft. Right?

01 32 40 C 20 seconds to burn. You got that, Texas?

01 32 45 CC Roger.

01 32 57 C Okay. 3 seconds.

01 33 00 C MARK!

01 33 01 P Okay. They appear to be firing good.

01 33 03 CC Roger. Texas confirms OAMS thruster firing.

01 33 23 CC Molly Brown, how are your attitudes holding?

01 33 24 C Perfect.

01 33 26 P 44 seconds to go.

01 33 27 CC Roger.

01 33 27 P MARK. 44 seconds to go.

01 33 49 P Okay.

01 33 55 P Coming up on — coming up on a minute.

01 34 00 P MARK.

[redacted]

TEX-1
MCC-1

01 34 02	C	7 ft/sec to go.
01 34 05	P	A minute, five.
01 34 09	P	Okay. 4 - 3 - 2 - 1 -
01 34 14	P	MARK!
01 34 14	C	Thrusting complete.
01 34 18	CC	Roger. Confirmed maneuver complete.
01 34 21	P	That burn was 1 minute and 14 seconds by our watches.
01 34 27	C	And when we started out, the IVI's were reading 51 ft/sec, and I burned them down to 2 ft/sec aft.
01 34 37	CC	Say again, Molly Brown.
01 34 38	C	As we started to burn my IVI's read 51 ft/sec, and we burned them down to the place where they read 2 ft/sec.
01 34 48	CC	Say again that last number.
01 34 50	C	2 - 0 - 0 - 2
01 34 56	CC	Roger.

CAPE KENNEDY

01 35 27	CC	Molly Brown, Cape Cap Com.
01 35 27	C	Go ahead, Gordo.
01 35 29	CC	Roger. Do you want to get your transmitter up to start your tape dump?
01 35 31	P	Yes, it's on. The transmitter is now DELAYED-TIME.
01 35 38	CC	Ready for your tape dump?
01 35 42	P	Understand. Going tape playback CONTINUOUS.

[redacted]

01 35 49	P	Tape playback is on CONTINUOUS.
01 35 53	CC	Okay, Molly Brown. Looks like your OAMS has leveled out before your burn. Can you give us an OAMS source pressure and temp again now?
01 36 16	P	The source pressure is 2050. Source temperature is 56.
01 36 24	CC	Roger. It looks like that pressure switch on that O_2 is failed. You probably better bring that O_2 heater from AUTOMATIC to OFF, and then manually control the temp from then on -- the pressure from then on.
01 36 43	P	If I go into high rate you can break it off the peg. Over.
01 36 48	CC	Okay, you can bring it off the peg by going to high rate. Is that affirm?
01 36 51	P	Roger.
01 36 52	CC	Okay. I have a time for you, where you will be nearest to the booster. Would you like to have that so you can look for it?
01 36 58	P	Roger.
01 36 59	CC	Roger. 02 + 08 + 52. Will be dead ahead at an elevation of plus 80 degrees at 190 miles. This will be just prior to darkness. It should be very bright. Proceed to see if you can rendezvous.
01 37 22	C	Roger.
01 37 37	CC	We are sending you a load now.
01 37 43	C	Roger, DCS load received.
01 37 48	CC	Roger. We got you loaded.
01 37 57	P	We had another DCS load just in, too.
01 37 59	CC	Roger. That was the actual values. The first one was the T_R.

[redacted]

[redacted]

MCC-1

01 38 05	P	Roger.
01 38 51	CC	Molly Brown, Cape Cap Com. Did you get your experiments for the first orbit?
01 39 08	CC	Molly Brown, Cape Cap Com.
01 39 15	C	Go ahead Cape Cap Com.
01 39 17	CC	Roger. We just wanted to get a confirmation that you got your experiments on time for the first orbit.
01 39 23	C	Roger. We got them on time for the first orbit.
01 39 26	CC	Roger.
01 39 40	CC	Everything looks good down here.
01 39 43	C	Roger.
01 40 08	CC	Molly Brown, Cape Cap Com. Our memory loads on the ground confirm your loads were correct in there, so you might delete all the MDIU readouts.
01 40 21	C	Okay.
01 40 49	P	Here is the blood pressure coming down.
01 40 53	CC	Okay.
01 41 03	CC	Tape dump is complete, Molly Brown.
01 41 07	C	Rog.
01 42 01	CC	You still got a blood pressure, John? We didn't read it.
01 42 08	C	He sent it, okay. I'll give you another one.
01 42 28	C	Gordo, do you have me a time for the Horizon Scan check?
01 42 41	C	Cape Cap Com, do you read, Molly Brown.
01 42 44	CC	Go ahead Molly Brown. Cape Cap Com.

[redacted]

01 42 46	C	Do you have a time for the Horizon Scanner check?
01 42 49	CC	Okay, sunset time is 16 + 34. Stand by, and I will get you the horizon scanner.
01 42 58	P	16:34.
01 43 08	CC	That is the time for it, Molly Brown. 16 + 34.
01 43 13	C	Thanks.
01 43 26	CC	Pretty spectacular up there, huh?
01 43 29	C	Say again.
01 43 30	CC	Pretty spectacular up there, huh?
01 43 33	C	Yeah, it really is. It really is!
01 43 40	C	We didn't get to see much of the States though.
01 43 43	CC	Clouded over? Too many clouds?

GRAND CANARY ISLAND

01 49 03	CC	Molly Brown, Canary Cap Com.
01 49 10	C	Canaries, Molly. Go ahead.
01 49 13	CC	Roger. We have systems GO on the ground.
01 49 16	C	Roger. We are GO in here. We are finishing our Alinement check.
01 49 26	CC	Roger. Understand, and Canaries transmitting a calibrate command.
01 50 27	CC	Molly Brown, Canary Cap Com.
01 50 30	C	Go, Canaries.
01 50 32	CC	Roger. After your burn your orbit is 85.6, 92.6.

[redacted]

CYI-2

01 50 38	C	Roger. 85.6, 92.6.
01 50 41	CC	And I have a 2-Bravo time.
01 50 46	P	I thought they weren't going to give those times to us.
01 50 49	C	Stand by.
01 51 15	C	Okay. What's the 2-Bravo time?
01 51 18	CC	Roger. ΔV 90. GMTRC 16 52 25. GETRC 02 28 35. Roll left 55.
01 51 45	C	Roger. 2-Bravo: 90 ΔV. 16 52 25 GMTRC. Elapsed time of 02 28 25. Roll left 55.
01 51 55	CC	That's affirm.

COASTAL SENTRY QUEBEC

02 16 20	CC	Molly Brown, CSQ Cap Com. Do you read?
02 16 23	C	CSQ Cap Com. Molly Brown.
02 16 26	CC	Roger, read you weak but clear. We have you green from the ground.
02 16 31	C	Roger. Getting ready for a translation burn.
02 16 44	CC	Molly Brown, CSQ Cap Com. We're standing by for the maneuvers.
02 16 55	CC	Roger. 5 seconds . . .
02 17 15	C	9 ft/sec – 10. Okay, now 1 second on the others.
02 17 22	CC	Molly Brown, CSQ. Would you give us your IVI readouts before and after the burn?
02 16 28	C	Roger, IVI readouts before the burn were all zeros. After the burn was 10 ft/sec forward.
02 17 38	CC	Roger. Understand. 10 ft/sec forward.
02 17 42	C	That was in the 009° attitude. 10 ft/sec forward.
02 17 44	CC	Roger.
02 17 47	C	That was with a 90° yaw.
02 17 58	CC	Molly Brown, CSQ. Be advised I sent T_X twice. I've had spacecraft reject. I'll try again.
02 18 13	CC	Molly Brown, CSQ.
02 18 16	C	Go.
02 18 17	CC	We still cannot get an MAP back from spacecraft on T_X.
02 18 33	P	Roger, I'll set the T_X for the . . . Over.

[redacted]

[redacted]

CSQ-2
CRO-2

02 18 38	CC	Say again.
02 18 45	CC	Molly Brown, CSQ. How did your attitudes hold during the maneuver?
02 18 49	P	Attitudes held very well.
02 18 52	CC	Roger.
02 19 53	CC	Molly Brown, CSQ.
02 19 54	C	Go ahead.
02 19 59	CC	You still look real good from the ground here.
02 20 02	C	Roger.
02 21 01	CC	Molly Brown, CSQ Cap Com.
02 21 03	C	Go ahead CSQ.
02 21 04	CC	Would you give us a propellant quantity readout before and after the burn?
02 21 09	C	Before the burn it was 66 percent, and now it reads 61 percent.
02 21 24	CC	Roger.
02 21 28	C	I'm not real sure of that before burn.

CARNARVON

	CC	Molly Brown, Molly Brown, Carnarvon Cap Com. How do you read?
00 23 25	C	Carnarvon, this is Molly Brown. Read you loud and clear.
	CC	Very good, Gus; we'd like to get a blood pressure on the co-pilot, please, and could I have your status?
02 23 36	C	Okay - - blood pressure's coming and our status is green.

[redacted]

	CC	Very good. We don't have any communications with the Cape at this time, but they have requested for me to run down your flight control problem a little bit. The first thing I'd like to know is what kind of rates are you getting if you just let it yaw?
02 23 57	C	They are very slow, Pete. Probably on the order of a quarter of a degree per second.
	CC	Okay and you are in a horizon scan mode, is that correct?
02 24 13	C	At the present time I'm on pulse and alining the platform.
	CC	Okay. You're in pulse alining the platform. Are your ACME logic yaw rate gyros and attitude drivers still primary?
02 24 29	C	Affirmative.
02 24 29	CC	It sounds to me like you've got a mechanical problem in the valve. Is that what you figured?
02 24 36	C	Roger, it must be very, very slight. We can't see the pressure go down.
02 24 40	CC	Okay, and you have turned off 3, 4, 7, and 8 yaw circuit breakers and put them on again, and that didn't have any effect?
02 24 46	C	Yes, we've gone through everything, Pete.
02 24 48	CC	Okay, and no cross-coupling.
02 24 50	C	Negative.
02 24 50	CC	Okay. We are not going to send you a load. Your T_R is good. I don't have your clock counting down with mine. I guess you have a different one in. We got your blood pressure and your clocks are on as far as SET goes.
02 25 16	C	Roger.

CRO-2
HAW-2

02 25 16	CC	And I have a question for John. I would like to know how his waste evaluation is doing.
02 25 26	C	In process.
02 25 27	CC	In process. Roger.
02 25 32	CC	You have a GO down here from everybody, and do you have suit temps for me, please?
02 25 42	C	Yes, suit temp is running 58°, Pete. We are okay.
02 25 45	CC	Righto.
02 26 02	C	2:26. Rate gyros primary. Roll jets yaw.
02 26 22	CC	Molly Brown, Carnarvon.
02 26 25	C	Go.
02 26 26	CC	Would you turn your real-time telemetry off after LOS from Carnarvon, please?
02 26 31	C	Roger, real-time off after Carnarvon.
02 26 34	CC	Yes. We didn't get a T_X up to you.
02 26 36	C	Roger.
02 27 14	CC	Molly Brown, this is Carnarvon. How do you read?
02 27 18	C	Still read you loud and clear.
02 27 19	CC	Okay, you'll probably go over the horizon, Gus. You look good here on the ground. We'll see you on your next go.
02 27 25	C	Roger, thank you, Pete.

HAWAII

02 49 48	CC	Hello, Molly Brown. This is Hawaii Cap Com.

[redacted]

02 49 52	C	Hello Hawaii. This is Molly Brown.
02 49 54	CC	Confirm your telemetry in real-time and acquisition.
02 50 01	C	Telemetry is in real-time and ACQ.
02 50 11	CC	Go ahead, Molly Brown.
02 50 12	C	I have a problem with the 8-ball here, keeping it alined, or orbit rate control is not right.
02 50 21	CC	Say again, Molly Brown. I didn't understand.
02 50 26	C	The attitude on the 8-ball is drifting badly. I'm trying to get it alined right now.
02 50 32	CC	Okay. Understand the 8-ball attitude is drifting badly. You have a GO from the ground. We are ready to up-link a 4-1 T_R to you.
02 51 00	C	Roger, go ahead and send it.
02 51 02	CC	Okay, sending now.
02 51 14	P	Roger, 4-1 time received and verified.
02 51 18	CC	And we would like to send you a T_X as soon as you are ready.
02 51 20	P	Roger. Send T_X.
02 51 35	CC	Right, sending T_X now. And we confirm your T_R -- in synch.
02 51 59	CC	Give us a hack when you start your gage correlation check.
02 52 10	P	Okay, Roger. Mark the gage correlation check.
02 52 12	CC	Roger. Got it.
02 52 50	CC	Molly Brown, Hawaii Cap Com. Are both your attitude indicators drifting together?

HAW-2
RKV-2

02 52 57	C	Affirmative.
02 52 58	CC	Okay.
02 52 59	P	Cabin temperature - - 92. Suit temperature - - 58. Cabin pressure is 5.6 Suit CO_2 is 3/4. Left bottle is 5100. Right bottle is 5050. O_2 quantity 62. Pressure is 840. Source temperature is 55. Source pressure is 2000. OAMS fuel - -
02 53 41	CC	Molly Brown, Hawaii Cap Com. Everything looks good on the ground. We will see you on the next time around.
02 53 47	C	Roger.
02 53 48	P	Roger. We are in the middle of the gage correlation report.
02 54 06	P	OAMS fuel temperature - - 68. RCS A temperature - - Gee! A temperature is 87.

ROSE KNOT VICTOR

02 55 32	CC	Molly Brown, RKV Cap Com. Over.
02 55 35	C	RKV, this is Molly Brown.
02 55 37	CC	Roger, we are standing by for your respiratory maneuver.
02 55 41	C	Roger.
02 55 43	P	The respiratory maneuver? I can give it to them.
02 55 49	C	Here it comes.
02 55 58	CC	Roger. We copy, Molly Brown. We are standing by for your pilot's oral temp and blood pressure.
02 56 44	C	Blood pressure is on the way.

[redacted]

02 56 46	CC	Roger.
02 56 55	C	RKV, Molly Brown.
02 56 57	CC	Stand by. Roger, we are receiving the blood pressure, Molly Brown.
02 57 12	CC	Molly Brown, RKV. We have received your blood pressure and temperature.
02 57 17	C	Roger, RKV. The platform alines all right when I'm in SEF and, evidently, when I go to ORBIT RATE it drives the ball off in roll.
02 57 33	CC	Roger. Understand. Stand by one.
02 57 38	P	The Gage Correlation Report is complete.
02 58 15	CC	Molly Brown, RKV Cap Com.
02 58 17	C	Go ahead.
02 58 18	CC	If you are drifting in ORBIT RATE, suggest you select a mode of your own for your tracking task coming up on the coast.
02 58 25	C	Roger.
02 58 26	P	I'll read these quantities off. The GMT was 1716 when we started. Propellant quantity was 60. Cabin temperature - - 92. Suit temperature - - 58. Cabin pressure - - 5.6. Suit CO_2 - - 3/4 millimeter. Secondary left O_2 bottle - - 5100. Secondary O_2 bottle right was 5050. ECS O_2 quantity - - 62 percent. Pressure - - 840. Source temperature - - 55. Source pressure - - 2000. Fuel temp - - 68.
02 58 59	P	Fuel pressure 295. RCS A temperature - - 87. RCS A pressure - - 3000. RCS B temperature - - 82. RCS B pressure - - 2650. Main ammeter - - 19. No. 2 - - 19.5. 1A - - 4.5. 1B - - 4.5. 1C - - 4. 2A - - 5. 2B - - 4 3/4. 2C - - 4 3/4. dc volts 23.5. S1 - - 29. S2 - - 29. C - - 27. 1A - - 24. 1B - - 24. 1C - - 24. Greenwich mean time is 1721. Completed.

[redacted]

RKV-2
GYM-2

02 59 03 CC Molly Brown, RKV. You are looking good here on the ground. If you have any further comments we are standing by.

02 59 08 C Negative.

02 59 10 CC Roger. Guaymas will be next.

GUAYMAS

02 59 51 CC Molly Brown, Guaymas Cap Com.

02 59 55 C Guaymas, Molly Brown.

02 59 58 CC Your 3α times are nominal.

03 00 01 C Roger . . . and nominal.

03 00 14 CC We are standing by for your coolant pump checks.

03 00 32 C What did you say, Guaymas?

03 00 34 CC We are standing by for your report on your coolant pump checks.

03 00 40 C Roger.

03 01 41 C Guaymas, go ahead.

03 01 44 CC Have you completed your coolant pump checks?

03 01 45 P Yes.

03 02 01 C Coolant pump checks complete.

03 02 04 CC Roger. What is the status on the checks?

03 02 17 C We couldn't get the pumps on simultaneously.

03 02 21 CC Say again, Molly Brown. You're broken.

03 02 24 C We couldn't get the pumps on simultaneously.

03 02 29	CC	I copied. You cannot get the pumps on simultaneously.
03 02 33	C	Roger.
03 02 43	CC	Guaymas standing by for our standby TM real-time modulation check.
03 03 09	CC	Molly Brown, Guaymas Cap Com.
03 03 12	C	Go ahead, Guaymas.
03 03 13	CC	We are standing by for your standby telemetry transmitter check with real-time.
03 03 20	C	Standby TM is in real-time.
03 03 22	CC	Roger.
03 03 38	CC	Molly Brown, that TM check is okay on the ground.
03 03 38	P	Yes.
03 04 02	CC	Molly Brown, Guaymas. Would you say again the trouble you are having with your pump check?
03 04 08	C	We had no trouble with the pump check.
03 04 10	CC	Roger.
03 04 17	CC	Would you remove pump A off of primary?
03 04 29	C	Pump A is off primary.
03 05 22	CC	Molly Brown. This is Guaymas handing you over to Texas.
03 05 23	C	Roger.

TEXAS

03 06 15	CC	Molly Brown, Cape Cap Com.
03 06 18	C	Go ahead, Cape Cap Com.
03 06 19	CC	Do you have your standby telemetry transmitter on and ready for a tape dump?

[redacted]

TEX-2
MCC-2

03 06 23	C	Okay. Our standby TM is in real-time.
03 06 25	CC	Okay. You are commanding it on. Alright, we'll give you the word on it then. What is the status of your other platform modes, Molly Brown -- BEF or FREE?
03 06 35	C	Say again.
03 06 36	CC	What is the status of your other platform modes, such as BEF or FREE?
03 06 45	C	SEF is fine. Orbit rate is the one that drives me off in roll. I haven't checked BEF yet. I'll go ahead and give it a check now.
03 06 53	CC	Okay.
03 06 57	CC	How long does it take you to build up this quarter degree rate in that yaw rate, starting from zero yaw rate?
03 07 03	C	It just gradually accelerates. It's some slow leak out there.
03 07 10	CC	Roger. Are you satisfied with obtaining and holding your attitudes visually?
03 07 15	C	Roger, and the platform is alining properly in SEF.
03 07 21	CC	Okay, fine. You want to turn your standby transmitter off?
03 07 22	P	Roger, standby transmitter off.
03 07 27	C	Standby transmitter off.
03 07 29	CC	Okay.
03 07 30	CC	Have you tried secondary scanner?
03 07 33	C	Roger. We were on secondary scanner for quite awhile. We are back on primary now.

[redacted]

03 07 38	CC	Okay, if you think the platform is drifting too much for that control mode characteristic check, just delete that -- that at 3 + 30.
03 07 48	C	Roger. I deleted that one horizon scanner mode check, too.
03 07 56	CC	Okay. The one earlier?
03 07 58	C	Roger.
03 07 59	CC	Okay. I have your 4-1 weather for you.
03 08 03	C	Roger.
03 08 04	CC	It is broken cloud conditions. 20 miles visibility. Wind is 20 knots, at 5 foot seas.
03 08 16	C	Roger, 20 and 5 foot.
03 08 18	CC	Roger. Did you have any success on contact with the booster?
03 08 22	C	We were facing the wrong way at that time, making a horizon scanner check.
03 08 27	CC	Yeah, I was afraid you would be. That was a little bit tight in there.
03 08 30	C	Yes.
03 08 33	CC	Did you manage to see anything over the U.S. because of the clouds?
03 08 36	C	We could see the southern part of California and Arizona, I guess. That was about it.
03 08 44	CC	You want to get your real-time telemetry and acq aid on?
03 08 54	C	It's on.
03 08 55	CC	Okay. We've got it.

[redacted]

TEX-2
MCC-2

03 09 09	CC	How's the weather, in general, around the world?
03 09 11	C	Very cloudy.
03 09 12	CC	I see.
03 09 16	C	We've seen very little land.
03 09 20	CC	All clouds and water, huh?
03 09 22	C	Yep, not even much water.
03 09 31	C	We just got DCS update. Was that the T_X?
03 09 34	CC	Roger. They got it up and verified.
03 09 44	CC	T_R looks good, Molly Brown.
03 10 28	CC	Molly Brown, Cape Cap Com.
03 10 30	C	Go ahead.
03 10 32	CC	We understand you don't have this rolling off in FREE mode. Is that affirmative?
03 10 39	C	I don't have any in SEF or BEF mode, Gordo. I haven't checked FREE yet. Give me another few minutes.
03 10 46	CC	Okay, fine.
03 10 48	C	But the platform does aline properly in the BEF mode. I can tell that already.
03 10 52	CC	Okay, real good.
03 11 56	CC	We have good verification on your load now, Molly Brown. It looks good.
03 12 26	CC	Molly Brown, Cape Cap Com.
03 12 29	C	Go ahead Cape.
03 12 30	CC	Have you had a chance to check that FREE mode yet?

[redacted]

MCC-2
CSQ-3

03 12 33	C	I'm in FREE mode now, and it looks like it is working alright.
03 12 35	CC	Very good. We were sure interested in that.
03 13 24	CC	Molly Brown, Cape Cap Com.
03 13 28	C	Go ahead.
03 13 29	CC	I would like for you to turn that cabin fan on for 2 minutes and then back off when you can, as a little experiment.
03 13 39	C	Okay, it's on.
03 13 40	CC	Okay.
03 15 03	CC	Molly Brown, Cape Cap Com.
03 15 05	C	Go ahead.
03 15 07	CC	That next normal burn will be a ΔV of 96.
03 15 12	C	Roger, the next burn will be 96.
03 15 15	CC	The time on that is 1 + 49.
03 15 27	C	Roger. 96 ft/sec and 1 + 49 seconds.
03 15 31	CC	1 + 49 and 96 ft/sec.
03 15 36	C	. . .
03 15 37	CC	Okay.
03 15 57	C	Cabin fan is off.
03 15 59	CC	Okay.

COASTAL SENTRY QUEBEC

03 48 14	CC	Molly Brown, CSQ Cap Com.
03 48 17	C	CSQ, this is Moll[redacted]own. Go ahead.

[redacted]

03 48 19	CC	Roger. What's the status?
03 48 21	C	We are GO.
03 48 22	CC	Roger, you look good from the ground. Stand by to copy 3 Bravo times.
03 48 29	C	Roger.
03 48 43	CC	Molly Brown, CSQ. Let me know when you are ready.
03 48 49	C	Roger. We are ready.
03 48 51	CC	GMTRC 18 37 58. Ground elapsed time 04 13 58. Bank angle - roll left 55. ΔV 93. Molly Brown, CSQ. Did you copy?
03 49 26	P	Roger. GMTRC is 18 37 58.
03 49 33	CC	Roger.
03 49 35	P	Bank angle, 55 left. ΔV 93.
03 49 39	CC	Roger.
03 49 46	CC	Molly Brown, CSQ Cap Com. Cape recommends you perform your OAMS retroburn in BEF after alinement, and stay in BEF up to retrofire.
03 50 02	C	Roger. Agree with that.
03 50 12	CC	Molly Brown, CSQ. Did you finish your retrofire checklist?
03 50 19	C	Roger.
03 50 28	CC	Molly Brown, CSQ. Stand by for a G.m.t. time hack.
03 50 32	C	Roger.
03 50 34	CC	On my mark, G.m.t. will be 18 14 40.
03 50 40	CC	MARK!
03 50 46	C	Give me one on the even minute.

[redacted]

03 50 48	CC	Roger.
03 51 00	CC	MARK!
03 51 01	C	Roger.
03 51 05	CC	We are standing by for your Sea Urchin Egg Experiment.
03 51 14	C	Roger. It's being activated.
03 51 18	CC	Roger. Would you give me a G.m.t. when you turn the handle?
03 51 22	C	Roger. G.m.t. 1 :20.
03 51 29	CC	Roger.

CARNARVON

03 56 00	CC	Molly Brown, Molly Brown, Carnarvon, Cap Com. Over.
03 56 04	C	Carnarvon, Molly Brown.
03 56 05	CC	Roger. Read you loud and clear. We are going to send you a new 4-1 command load and T_R. Do you have your timer set at 34:00?
03 56 14	C	Timer set at 34:00.
03 56 16	CC	Okay. In the meantime I'd like to get helium source temperature, pressure, and quantity readings from you.
03 56 29	C	OAMS propellant quantity is 55 percent.
03 56 34	CC	Roger, 55 percent. Could I have the temperature and pressure? We are going to send you a command load at this time.
03 56 39	C	Roger. Source pressure is 1950. Source temperature is 81°.

[redacted]

03 56 46	CC	Roger, thank you. Command load coming.
03 56 54	C	And the preretro checklist is complete.
03 56 58	CC	Roger. Understand, preretro checklist is complete. You've got a new T_R. You've got a command load. Your clocks are synched down here on the ground and I have about 2 minutes 15 seconds to go to your 34-minute time hack.
[illegible]	CC	If you are looking at the ground, Molly Brown, Carnarvon has a big fire going for you down here.
03 57 28	C	We are blunt-end-forward. We can't see them yet.
03 57 32	CC	Okay.
03 57 48	CC	Molly Brown, Carnarvon Cap Com. We have a GO here on the ground, and I have about 1 minute 30 seconds till your time hack.
03 57 59	C	Roger.
03 58 03	CC	Molly Brown, Carnarvon. When you have a chance from the pilot, the medics would like to get a reading on the food evaluation.
03 58 16	C	No time, we'll see them when we get back.
03 58 18	CC	Okay.
03 58 27	P	Everything is in order.
03 58 29	CC	Roger, Roger.
03 58 49	CC	Molly Brown, Carnarvon Cap Com. Standby for T_R MARK of 34:00, in approximately 30 seconds.
03 58 58	C	Roger.
03 59 18	CC	5 - 4 - 3 - 2 - 1.
03 59 23	CC	MARK. T_R 34:00.

03 59 27	C	Roger. The clock is counting down.
03 59 34	CC	Molly Brown, Carnarvon. The medics would like to get the respiratory maneuver when you have a chance.
03 59 43	C	Roger, it's coming.
03 59 51	CC	Molly Brown, Carnarvon has it loud and clear.
04 00 06	C	. . .
04 00 10	CC	This is Carnarvon, Molly Brown. Say again.
04 00 17	C	What's this new GMT of retrofire you gave us?
04 00 21	CC	Say again.
04 00 22	C	What is the GMT of retrofire you just gave us?
04 00 25	CC	Roger. The GMTRC is 18 57 23 for a GETRC of 04 33 23.
04 00 45	CC	Molly Brown, Carnarvon. Do you want the rest of the quantities? The Cape said it wasn't necessary unless you want them.
04 00 59	C	That's okay.
04 01 18	CC	Molly Brown, this is Carnarvon.
04 01 23	C	Go ahead.
04 01 24	CC	Cape recommends that I give you your backup quantities there for GMTRC of 18 57 23. It'll be a roll left 55. GMTRB of 19 08 23. Roll right 65 at G.m.t. 400 K 19 01 29.
04 02 00	C	We got it.
04 02 02	CC	I only have one question for you before you go out of range. How's the flying up there?
04 02 16	C	Great!
04 02 18	CC	Fine GT-3. See you next trip – next year.
04 02 22	C	Okay.

HAWAII

04 20 14	CC	Hello, Molly Brown. Hawaii Cap Ccm.
04 20 17	C	Hawaii, Molly Brown is all ready for burn.
04 20 20	CC	Roger. Give us a hack on your event timer.
04 20 23	C	Okay, it'll be 12:55 on my MARK.
04 20 28	C	MARK.
04 20 28	CC	Right, we are right on.
04 20 42	C	Okay. On my IVI's, I have 97 ft/sec forward and the others are zeros.
04 20 49	CC	Roger, and give us a mark for the start of burn.
04 20 53	C	Roger. We've got about 25 seconds to go.
04 20 56	CC	Roger.
04 20 59	P	That's perfect out-the-window alinement.
04 21 01	C	Yes.
04 21 12	C	10 seconds.
04 21 17	C	We have 50 percent propellant quantity indicated. Getting ready to fire - -
04 21 23	C	MARK!
04 21 28	CC	We got your start of burn.
04 21 30	C	Yes, it's burning.
04 21 32	C	There's 90 - -
04 21 43	C	There's 80 - -
04 21 54	C	70 - -
04 22 05	C	60 - -

04 22 17	C	50 - -
04 22 22	P	There's a minute of burn.
04 22 29	C	40 - -
04 22 43	C	There's 28 - -
04 22 51	C	20 - -
04 23 02	C	10 - -
04 23 10	P	4 - 3 - 2 - 1 -
04 23 14	C	MARK! End of burn.
04 23 16	CC	Right. Mark end of burn. Good show.
04 23 19	P	We timed that a minute and 48 seconds.
04 23 25	CC	Give us your IVI readings.
04 23 26	C	IVI's: Fore-Aft 0, Left was 1, Up was 2.
04 23 34	C	That was the end of burn.
04 23 35	P	Yes.
04 23 36	CC	Okay, and how did your attitudes look?
04 23 39	C	Attitudes were right on, ±2 or 3°.
04 23 42	CC	Okay, they look good on the ground.
04 23 45	C	Roger.
04 24 18	C	We had indicated 22 percent when we got done. (OAMS propellant quantity)
04 24 23	CC	20 percent. Rog?
04 24 24	C	About 22.
04 24 26	CC	Okay.

ROSE KNOT VICTOR

04 28 33	CC	Molly Brown, RKV Cap Com.
04 28 38	C	RKV, Molly Brown.
04 28 38	CC	Molly Brown, Molly Brown, RKV Cap Com. Over.
04 28 42	C	Say again.
04 28 43	CC	Molly Brown, RKV Cap Com. How do you read?
04 28 45	C	Read you loud and clear, RKV.
04 28 47	CC	Roger. Have you completed T_R-5 checklist?
04 28 51	C	Roger.
04 28 52	CC	Roger. I'll give you a mark at T_R-4.
04 28 55	C	Did you set your clock over there?
04 28 56	P	Yes, I want to start it at retrofire.
04 29 11	C	Okay, both rings working.
04 29 12	CC	Stand by.
04 29 23	CC	MARK!
04 29 24	C	Roger.
04 29 25	CC	Your clock looks like it's counting good.
04 30 11	C	T_R-5 is complete.
04 30 14	CC	Roger.
04 30 20	CC	Molly Brown, RKV Cap Com.
04 30 23	C	Go ahead.
04 30 24	CC	You want to mark at T_R-1?

04 30 27	C	Not necessary.
04 30 28	CC	Roger.
04 31 21	C	2 minutes.
04 31 22	CC	Molly Brown, RKV. You look good from the ground.
04 31 24	C	Roger. Thank you.
04 31 25	CC	Roger.
04 32 27	CC	Molly Brown, RKV.
04 32 29	C	The adapter has separated.
04 32 30	CC	Roger, we confirm on the ground. Adapter sep.
04 32 32	C	Yes, you can really feel it.
04 32 34	CC	Say again.
04 32 37	C	I said you can really feel it kick off.
04 32 49	P	T_R-30.
04 32 49	CC	Roger.
04 32 52	P	Arm auto-retro.
04 32 56	C	Auto-retro armed. Squibs armed.
04 32 58	CC	Roger, Molly Brown.
04 33 07	C	16 seconds, 15 seconds.
04 33 08	P	Okay.
04 33 13	CC	10 - 9 - 3 - 7 - 6 - 5 - 4 - 3 - 2 - 1 - Retrofire.
04 33 23	C	Auto-retro
04 33 25	CC	Manual retro.
04 33 29	CC	Rocket 3.

[redacted]

RKV-3
GYM-3

04 33 33 CC Rocket 2.

04 33 38 C Three of them.

04 33 38 CC Rocket 4.

04 33 40 CC Molly Brown, do you confirm all rockets firing normally?

04 33 44 C All rockets fired normally and attitudes were right in the center.

04 33 48 CC Roger. Pass your IVI readouts on to Guaymas. RKV out.

04 33 49 P Roger.

GUAYMAS

04 33 55 CC Molly Brown, Guaymas Cap Com. Do you copy?

04 33 57 P Roger, Guaymas. The IVI's readings were 331 Aft, 105 right and 4 Up. Right in the center.

04 34 07 CC Roger. I copy. 331 Aft, Right 105, Down 04.

04 34 15 P Roger, and retropack has jettisoned.

04 34 17 CC Roger.

04 34 48 CC Molly Brown, Guaymas Cap Com.

04 34 51 C Go.

04 34 52 CC I'm prepared to give you a T_R + 3 minute time hack if you need it.

04 35 00 P That would be good.

04 35 01 CC Okay, and I have some event times for reentry: 400 K feet 19 10 29 - - stand by, Molly Brown.

04 35 24 CC Molly Brown, correct that 400 K feet. That's 19 01 29.

[redacted]

04 35 32	C	Roger.
04 35 54	CC	Molly Brown, I'll give you a time hack in approximately 30 seconds.
04 36 09	CC	Molly Brown, Guaymas. Stand by for a T_R + 3 minute time hack.
04 36 18	CC	5 – 4 – 3 – 2 – 1 –
04 36 23	CC	MARK!
04 36 25	CC	Do you copy?
04 36 26	C	Roger. We got it.
04 37 19	CC	Molly Brown, stand by for Texas.
04 37 24	C	Roger.

TEXAS

04 37 40	CC	Molly Brown, Cape Cap Com.
04 37 44	C	Molly Brown here, go ahead.
04 37 46	CC	Roger. I'm getting your bank angle times momentarily. Your start of Communications Experiment is 19 05 14.
04 37 59	C	Roger. I have steering on the computer.
04 38 05	CC	I didn't read you on that.
04 38 08	C	I'm getting initial bank angle commands from the computer.
04 38 12	CC	Okay.
04 38 41	CC	Molly Brown, I have your backup times on the bank angles and time to reverse bank angle.
04 38 47	C	Go ahead.

[redacted]

TEX-3
MCC-Reentry

04 38 49	CC	Bank left 45°. Bank right 55°. Time to reverse bank angle 19 08 17.
04 39 02	C	Give me an elapsed time after retro.
04 39 10	CC	Stand by one.
04 39 21	C	I'm rolling to 60° left now.
04 39 27	CC	Roger, bank left 45.
04 39 29	C	I mean 45.
04 39 36	CC	10 + 54 after retro is reverse bank angle.
04 39 42	C	Say again.
04 39 48	C	What did you say?
04 39 50	CC	Time from retro fire to reverse bank angle is 10:54. 10 minutes 54 seconds.
04 44 44	CC	Molly Brown, Cape Cap Com. Over.
04 44 54	C	. . .
04 45 02	CC	Molly Brown, Cape Cap Com.
04 45 15	P	. . . end of that.
04 45 20	CC	Molly Brown, Cape Cap Com. Over.
04 45 26	CC	Go ahead, Molly Brown.
04 45 40	CC	Molly Brown, are you reading Cape Cap Com now? Over.
04 46 15	CC	Molly Brown, Cape Cap Com.
04 46 17	C	Roger. We're down to 80 000 feet. My needles show us about 25 miles short.
04 46 23	CC	Roger, indicating about 25 miles short on your computer. Very good.

[redacted]

04 46 33	CC	I have a drogue time 19 10 42. What is your altimeter reading?
04 46 38	C	Reading 60 000.
04 46 43	CC	You say 70 000?
04 46 48	C	There goes the drogue.
04 46 49	CC	Roger.
04 46 52	C	Okay, we have a drogue.
04 46 54	CC	Roger, drogue.
04 46 59	CC	Looks pretty good, doesn't it?
04 47 01	C	Our propellant valves are shut off. We've got a 40 K light. Really oscillating.
04 47 11	CC	Roger.
04 47 18	C	Passing through 30 000 feet.
04 47 21	CC	Roger.
04 47 31	CC	Approximately 1 minute to the main.
04 47 42	C	Intrepid, this is Molly Brown.
04 47 44	CC	Roger. Go ahead.
04 48 08	CC	Molly Brown, Cape Cap Com. How is your main?
04 48 12	C	We don't have a main yet. Passing through 13 000.
04 48 16	CC	Roger.
04 48 40	CC	Molly Brown, how is your main. Over?
04 48 47	C	Okay. We have a good stable chute. Going to landing attitude.
04 49 17	C	Cape Cap Com, this is Molly Brown.

[redacted]

MCC-Descent
INTREPID-
Descent

04 49 19	CC	Molly Brown, Cape Cap Com.
04 49 22	C	Intrepid, this is Molly Brown.
04 49 26	RS	Roger. We are reading you now and then. How us?
04 49 28	C	Loud and clear. I have 30 ft/sec rate of descent. Passing through 5500.
04 49 57	RS	Molly Brown, this is the Intrepid. It appears you will land 5 miles ahead of me. Over.
04 50 03	C	Roger. Thank you.
04 50 08	C	Do you have us in sight, Intrepid?
04 50 11	RS	Not yet. Over.
04 50 13	C	Roger.
04 50 16	C	Rescue beacon coming on.
04 50 19	C	Passing through 4000.
04 50 28	C	That drogue chute is right above us, or the pilot chute.
04 50 31	RS	I understand the drogue is just above you, or the pilot chute.
04 50 35	C	Say again.
04 53 39	RA	Molly Brown, this is Big Box 15. You are loud and clear. Check with Big Box 14.
04 53 40	C	Roger. We're floating well in the water.
04 54 45	C	I read you. Who is this calling Molly Brown?
04 54 52	C	This is Molly Brown, call again.
04 54 56	RA	Molly Brown, Big Box 14. Go ahead.
04 54 58	C	This is Molly Brown, Big Box. Go ahead.

[redacted]

Recovery

04 55 03	RA	Roger, sir, if you will give me a 15 second hold-down.
04 55 06	C	Okay, I'll hold it down.
04 55 16	C	Big Box, Molly Brown.
04 55 28	RA	Molly Brown, Big Box 14. We have yo· on . . .
04 56 20	RA	Molly Brown, Big Box 14. Would you give me another hold-down?
04 56 38	RA	Molly Brown, Big Box 14.
04 57 51	RA	Molly Brown, Big Box 14. Another hold-down, please.
05 00 26	RA	Okay, Molly Brown, I've got a fix on you. Big Box 14.