

I just *knew* I'd work on the Moon, but, like, I never figured on getting a job there before I finished high school. So totally prime! I wasn't even bummed when it was only delivering pizza—it was on the Moon!

Really, Dad started it. I was playing a game, ignoring my room, all pink and frills, a ten-year-old girl's dream of a woman's world. I was almost thirteen and beyond that stuff. The game was a cool new one. I was slipping and sliding my way across a marsh, full of lizards, frogs, snails, and other threatened and endangered species. The idea was to avoid running over them while hunting the rogue robots that did. I got points for incapacitating the bad bots long enough for a repair crew to reach them and correct their programming. You lost points if you damaged the bots too badly. Totally ace.

"Good game, Nikki?" Dad asked.

I almost jumped out of my chair. "Great, Dad. Way cool sim. You can almost smell the flowers. Course, bummer, I don't have a VR helmet," I wheedled.

"Would you like to do it for real? Drive a real robot on the Moon?"

"Way prime," I shrieked. Everybody knew you could rent time on the lunar robot explorers puttering around the Moon. Anybody with the money could drive the bots when they weren't being used for science. Problem was, they weren't cheap. "How long could I drive it?"

"Would fifteen minutes be enough?"

I did the math. "Yes!" I was really getting a birthday present this year!

"First, you have to do the research." Dad slipped into lecture mode. "What moon rovers are available? Which one do you think would be the most interesting to drive and why? Pick a preferred option and a few fall back ones and put a report together for Mom."

Neat! Mom and Dad were treating this like a full-fledged project. I slammed out of the game and rolled into the net for research. My birthday was in two days; which rovers would be in daylight? Of the nine on the Moon, three were hibernating for the night. Two more were new arrivals and still tied up with science where they'd landed. One was nudging its way around Tycho Crater; that looked like the most fun. Two were in the lunar uplands around the seas of Nectar and Serenity. They might be good. Then there was the one shuttling across the south pole, measuring water. That would be my last choice. Then I checked the length of the waiting list. Duh. All were booked solid for the next six months—except the polar rover. I outlined the situation to Mom.

"What do you want to do, Nikki?"

"I'd kind of like to drive a rover before I get my driver's license."

"I'll sign you up for the water survey, dear."

My birthday party was at the local pizza parlor. I had a bunch of the girls over from school, as well as Jer and a couple of his friends. Dad seemed happy that the guys were so few. I think this whole moon rover thing was just his way to get me interested in something before guys started following me home. He was too late; Jer had been carrying my books since third grade, but there are some things you don't tell your folks.

Anyway, after I'd survived "Happy Birthday to You," in a dozen wrong keys, Dad took me over to the lame Vehicle Remote Controller, just a box with fakie wheels, a tiny 30-inch monitor, a joystick for direction and a pedal for the brake. Who needs a brake? Dad buckled me in—I needed a seat belt less than a brake—said "don't forget to point the camera up," and lowered the lid on the VRC. It still smelled like pizza.

Then the monitor lit up; I was looking at a gray, boulder-strewn field on the Moon. I slapped the joystick for speed, and a crater moved closer, faster. I flipped the joystick to the right. The entire scene changed. I made that little moon buggy do a complete turn and got a view of this entire huge crater with rocks and little craters all over inside it. I did a

second turn before I realized I was just doing wheelies on the Moon like some dumb kid. But I wanted to see it all, over and over again!

I remembered to point the camera up. The stars were unblinking pinpricks against a vast, black sky. I felt so tiny. Then I turned the camera down. Water crystals sparkled in my tracks. I'd uncovered a rock in my wheelie—a rock that had been there since the Moon was made, just waiting for me to come along.

I put the rover in gear, going forward, like its mission plan said on the map in front of me. At the bottom of my screen some instrument reported water content of the dust beneath my rover. I was recording scientific data!

The rover was headed for an ancient crater where a real scientist would take over and do something really scientific. But for the moment, it was mine. I drove forever—and in only a second, the screen went blank. I just sat there staring at the gray monitor—and remembered how to breathe.

I wanted more.

After that, every spare ten bucks I could get my hands on went for another minute on the Moon. Luckily, grunge was making a comeback. Mom never caught on that I outfitted myself for school at the Salvation Army. Clothes money went for rover time. Lunch money too. Anything to spend another five minutes alone on the Moon.

Of course, I usually wasn't all that alone. Jer got hooked, too. He started designing us our own buggy controller so we could do our time right from my room. You could buy a Kopy Kat? VRC with full emulation for \$10,000, but my fourteenth birthday passed without even a party; money was tight. So Jer and I started putting one together up in my room from odd parts.

And found out that Dad had done some really interesting programming with the motion detector on the burglar alarm. When I was just a little kid, it felt real good to know that Mom and Dad could see anywhere in the house, especially the monster that hid under my bed. Later, when I was eight, and Mom explained to me how young women need their "privacy" and she was removing the camera from my room so I could have my privacy "just like her and Dad had," I felt very grown up.

"But I'll keep the motion detector on alert," Dad said, "so if any strangers come into your room, the alarm will go off."

At fourteen, I didn't consider Jer a stranger.

"Dad, Jer's lived next door since forever. We're just building a rover emulator. Why won't you give him full access to my room?"

"I thought Jer lived in our refrigerator," Dad said, giving Mom one of his sideways grins. So this was going to be a two on one talk. It was times like this I wish my folks had had two kids; that way at least it would be a fair fight.

"Honey, a young woman's room should be a private place for her."

"But where else can we put our kopy kitten-ulator? Dad's shop just swallowed the rec room for a spare parts locker. You've got the last bedroom laid out as a project management center. Maybe if we moved the dining room table out to the screened porch, I could set the VRC up in here."

"No!" They got that word out together. I expected they would. Dinner was a "sacred" time for the family to be together. Usually.

I won and I lost that night. The VRC stayed in my room, but Jer only got unlimited access to the ground floor. We had to keep our distance, and keep moving—but not too fast. Dad really did some programming on that alarm. I know; Jer told me. He tried and tried to get a work-around on Dad, but everything he tried, Dad had something there before Jer did. Bummer parents don't trust their kids more!

So there I was, fifteen going on sixteen, lounging on my bed alternately staring at the want ads and at the pink wallpaper, wondering if Mom was right and if I should redo my room different from when I was ten. I'd really rather use the money for rover time; Jer didn't mind how my room looked. He was sitting over in the corner by the skeleton of our kopy kitten, in the cast-off chair from the living room, his nose in a reader doing homework. I couldn't make up my mind. Do I want a job to pay for my own car insurance or more Moon time? Mom would make me save some of the

money for college. Jer's grades would get him a scholarship; mine might get me in. Then I spotted the ad from Artemis, Inc. and sat up.

"Hey, Diana Base is looking for a fast-food delivery person. Why would a high-tech place like that want a delivery girl?"

Jer glanced up from his chair. It was as close to my bed as Dad's latest algorithm would allow. "Someone's got to keep an eye on those dumb robots they got up there."

"And some dumb barney they pay minimum wage is going to be smarter?" I shot back.

"They aren't going to hire any stups, Nikki Ann." He was talking at me like he had the time I couldn't get the concept of the number eight. I'd bopped him over the head then with my reader, but I wasn't three years old anymore. I had new ways to take him down a notch.

I stretched out on my bed, hands reaching for the headboard, back arching. His IQ plummeted as he tried to ignore my silhouette, nicely augmented by the two new friends I'd developed straining against my tank top. Who said it wasn't nice being a girl? "So, what are these non-stups going to do for their minimum paycheck?"

"Uh . . . take care of the bots," Jer stammered.

"Not maintenance!"

"No," he blinked, gave up, starred, then came back to the word fight with a vengeance. "Weight is gold on the Moon, lunkhead. They don't want to warehouse a lot of spare parts and maintenance people, so they ship up the toughest, dumbest machines they can get with the longest mean-time-between-failure, and let some earthbound bunny do the thinking for it."

"I could do that." I said, and highlighted the number in the ad, pulled up the resumé they'd had us do in school, appended that I had over 350 hours in a Lunar Rover, which was a lie, and sent it. "Wonder when I'll hear from them?"

"Shouldn't take too long," Jer said. "A routine ought to be able to check out your resume in no time. Too bad you couldn't put down all your Rover hours." The three hundred and fifty hours were only the ones I'd signed and paid for. Jer had almost as many hours, as did several kids at school.

But one of Jer's first big hacking credits was breaking the lock on the rover. Now, when one of us rented time, all of us got to ride along. Jer had also figured out how to store the file so we could ride it again as many times as we wanted. Going backseat on someone else's ride, or an old ride wasn't as much fun as realtime, but it was still time on the Moon as far as I was concerned.

Of course, storing all those vector images was almost a stumper. You couldn't tell your folks you needed a couple-of-thousand-terabyte array for your birthday to store pirated images. So we went totally creative.

There was lots of spare disk space around the house. Nearly half of the house management system's drive was empty. Mom never used all the cooking options in the microwave; we dumped over half of them and she didn't miss one. We'll never own a Cashmere sweater, so I got rid of a lot of the washer/dryer settings, too, and loaded up images. Jer and I couldn't walk around either of our houses without bumping into image data, but grownups didn't notice a thing. Duh. I think everyone over twenty-one is blind.

It took over a week for the Artemis people to get back to me. The woman who called wasn't too old; she couldn't be thirty. She liked my resumé. My moon buggy hours seemed to impress her. "Do your friends ride a lot?"

I rattled off four who did, "But I have the most hours."

She smiled at that and asked about my access to a computer. I sent her a download of the Vehicle Remote Control system Jer had built for me with its latest updates and additions. That earned a raised eyebrow.

"Quite a rig you have."

"We built it ourselves. Well, actually, Jer, my boy . . . ah, the guy next door, built most of it. He'll fix anything that breaks."

She looked at me, big smile on her face. "I bet he will. Here's a number. Dial it tomorrow at 1:30 a.m. GMT," she glanced offscreen, "that will be 5:30 p.m. your time, and you start work." I didn't tell her I knew darn well what GMT time it was here. Rovers ran on GMT. I was too happy at the moment to take the time to straighten out a grownup who thought I was dumb.

I called Jer on our network. "I got the job! I start working on the Moon tomorrow after school!"

Next afternoon, on the walk home from school, I wanted to celebrate. Jer suggested a milkshake. "Naw. That's here and gone. I want something I can keep." I headed across the street, dodging traffic, Jer dodging right behind me. Some old timers in a fifth wheel rig were laboring up the hill, we squeaked across just ahead of them. The gray-haired lady driving just shook her head as she went by. I laughed.

"Where are we going?"

"The Teddy Bear Factory!"

"Not again."

"And what's wrong with a cute, cuddly little teddy bear?" We'd had this conversation before. Many times before.

"Nothing, if you're a girl."

"And what's wrong with a girl?"

There, I had him. Didn't used to. But the last couple of years, that was the winning line. Well, not always. Sometimes he'd won with "You're not going to waste money on fluff that would buy rover time." He was quiet today as I eyed the different furry options. They were so cute. I'd just die if I ever found a bear in a spacesuit—on a rover.

"You know, maybe you could buy one today. You know, to celebrate."

I grabbed his hand, felt for a pulse, then brushed my hand over his forehead. He didn't pull away like he used to. "Help, police! Some aliens have stolen my friend. Jer would never say something like that."

He ignored my carrying on, stuffed his hands in his pockets, and explained himself. "Well, you know, if you're working for Artemis, you're jacked directly into their system. If the locks aren't too tight, maybe I could get a hold of the downlink from the rovers. Go direct to the source."

"You mean we could have it all!" I screamed, pulling him into a hug.

"I think so." Jer actually turned red. I gave him a kiss and he got redder.

"Let's get home. Make sure everything is ready. Race you." I won. He's the brains of the act; I'm the muscle. My system came up without a hitch. I was ready fifteen minutes early, so I ran an old rover drive while I waited. At 5:29 sharp, I dialed in, ready for anything.

I got a flat video. All kinds of dumb stuff on how I'd get paid, (slow and not much), what my benefits were, (none), how I'd have to have my school report card copied to them. They had a reward program, extra money for good grades, a bonus on top of that for honor classes. What do you know, Jer's pushing might actually make me a few extra bucks. Only after I passed a test on that junk was I allowed into the interesting stuff. And that was a disappointment again.

They were starting me out as a cook!

They had a cook-bot that made the pizza and stuff from scratch. Most of the ingredients were still lifted from Earth, but the flour was moon-grown. My job was to take the orders and see that the bot didn't waste anything making them.

Somebody else got to oversee the delivery-bot.

"I think you have to get promoted up to delivery," Jer said. "Didn't you see that part in the employee briefing?"

I'd missed that.

Bummed, I spent four hours in my bedroom making sandwiches, pizza and whatever else was ordered by the crew that really worked on the Moon. I didn't see anything I couldn't have seen standing at the counter of the local Pizza Heaven. Big bummer.

Still, I didn't let that bother me. Jer was at my elbow, his reader plugged into my station, tapping away at any outlets the program gave him. He didn't hit pay dirt that first night, but he was pretty sure he would. "Your Dad's using tougher lock-outs than they do." Probably because they trusted their employees more than Dad did me.

Still, it took Jer the better part of two weeks to get all the way in. Every time he'd get past one lock, he'd hit another. "This is more fun than a game," he muttered as I watched bread rise and two pizzas bake. It was just a job. The third week was when it got interesting.

I got my paycheck and Jer cracked into the rovers. To keep Mom happy, I put half my check into the college fund. The other half went for two monster hard drives. While I cooked, Jer downloaded for all he was worth. By the second shift, we started dual operating. Jer set up some simple alarms on the oven and cook-bot and I watched them on one monitor screen. On the other three monitors, we started touring more of the Moon than we'd ever seen before. Not all the rovers are available to rent. Usually the newer ones are still knee deep in science where they were landed and not yet really roving. We got that feed. I got to where I could take an order and get the bot going on it without taking my eyes off of the real Moon feed. It was great.

Then we hit a problem.

It really wasn't our problem. I mean, my job was going great. But it was sunny down in California, and the surf was up according to the weather report Jer called up. Anyway, my delivery driver must have headed for the beach, cause he sure wasn't on the job. It's Friday night on the Moon, and all these folks just want to kick back. I'm cooking like mad, and the delivery bot is sitting out there—totally parked.

So I loaded it up and took it for a spin around Diana Base. And discovered why you had to be checked out on that dang thing before they'd let you drive it. Knocking on doors and delivering the stuff was no problem. Getting there was not fun.

Like everything about Artemis, Diana base was being built on the cheap. To get as much air and dead space between the people and radiation from space, they were digging the base down as far as they could; I learned that in school. Driving around the base showed me what that meant. On the surface, under the bubble domes, things look spacious. Once you get underground, it's cramped. If you don't watch your bot every second, it can run into things. The map is a help, but they're changing things all the time, and a pile of crates or a parked construction rig may be blocking what looked like the fastest way from here to there.

I had to really think about where to drive that bot. And you better not run into anything. I almost did a couple of times when I misjudged how wide the space was. Scraping against a wall would be just a matter of paint. Knocking over a couple of boxes, even in Moon gravity, made a mess and might break something. I was careful.

An hour into my shift, my supervisor showed up apologizing about her beeper batteries being dead and I guess ready to take the delivery bot out. I heard a surprised little "Oh," when she saw where it was.

"Who's doing the cooking?"

"I am," I assured her. "I've got alarms set, and when the delivery bot's in a safe stretch, I do a quick look around the kitchen. Everything's fine."

Her "We'll see," sounded like one of Mom's more dubious ones, but after five minutes, she was back. "You *have* gotten things under control. I like your alarm routines. Do them yourself?"

"My friend, Jer, did them for me. That's okay, isn't it?"

"So long as you're doing your job, I have no problems. Neither does Artemis. I think we have a vacancy for a driver. Let me brief you on how it's done." So, for the rest of the shift, I learned her tricks. She kept her own map of Diana base, updating it constantly with a little routine that showed which passageways were temporarily blocked, which had been permanently changed, but not yet entered into the main map, and where you might be able to slip by. She even had a shortcut that took her through one of the labs. "Be real careful if you do that one. Sometimes they work late. Until they've ordered something, don't go in there. But once you've delivered to them, they'll usually let you cut through. Gary, the supervisor there, loves flat bread, so if you've got any spare ends, and he's working late, drop him off the ends and you'll have a friend for life, or at least the rest of your shift.

The things you have to remember!

I got a promotion, and a bonus for my double shift. Jer and I spent the bonus on one of those new seats. You're riding around the Moon, going up, down, riding over a little crater, you can see the camera jarring, but the seat under your pants is still acting like a chair in your bedroom. This new seat changed that. You go up, it leans back. You go down, it leans forward. It bumps when the rover bumps. It was almost perfect.

But not quite.

"Mom, I really need a helmet. One that'll let me see all around."

"Well, dear, save up for it."

"I've almost got enough. If I didn't have to pay into the college fund this month, I'd have it."

That brought Mom out of the project completion schedule she was updating for an insurance company. "Honey, we agreed that half your check went into savings."

"I know, Mom, but if I put all of next month's check into savings, I could be using the helmet this month. Some of the scraps I've been in 'cause I didn't quite have as much clearance as I thought won't happen when I have a helmet." Mom and Dad should understand that. They were all the time upgrading their systems to stay competitive. Rarely did any of the people they contracted with pay for an upgrade; still, they were always happy to make use of ours.

I could tell from Mom's look I'd won. I gave her a hug and headed back up stairs. Jer had been comparing helmets, searching the net for the best one for me. When I'd left he'd narrowed it down to three.

"I think you ought to buy this one," he said as I came back in. He'd never doubted I could talk Mom around. "Both these come from the same factory in Burma, but this one has Indian software. It's a lot cleaner."

I ordered it. When it arrived, Jer had a ball improving it. The seat also wasn't nearly sensitive enough for him. He improved it, too. He swore now that if I drove over a dime, I could tell if it was heads or tails. I could sure feel the bumps in Diana Station where they'd added this on or dug that new space. I bet the people up there were all the time stumbling over things.

Of course, the newest wing, where they'd put in the honeymoon suites and the space camp for rich kids was all first class. Wide, uncluttered corridors were painted anything but dull gray. It would have been a fun place to drive if the kids weren't so chintzy on their tips. The newly married couples almost made up for that. They were a lot of fun to deliver to. Which got me thinking of Jer in ways I'm sure Dad wouldn't approve. It would be fun, honeymooning on the Moon. But we could never afford it.

I concentrated on missing a new pile of crates.

Between the helmet, the seat and Jer's refinements to both, I had an emulator that Kopy Kat would eat their hearts out for. I was in heaven. All the delivery bots and the new rovers have fixed cameras covering 360 degrees around them. With all three monitors in front of me slaved to the forward camera, I didn't know what was behind me. And it really took the fun out of the ride if I switched one for a rear view. I wasn't driving a bot, I was just some security guard, looking at three different pictures.

Not with the helmet. You glance over your shoulder, and the view switches from front to back like it should. At least it did after Jer did a few enhancements. You look up, you see up. Ace, so ace. I got to where I could move that delivery bot around the base like it was me on blades. In the new corridors, I could take the corners so fast, the bot was on two

wheels and the seat let me feel it. One of the guys in the lab put a decal on my bot. "Rocket Girl." It had a cute blond astride a rocket with the cratered Moon in the background. I just said thanks a lot and didn't tell him I was a redhead.

Jer made me a picture of Rocket Girl and hung it on our kopy kitten. His "Rocket Girl" was a redhead.

Everything was going totally great. So how come, after my Friday shift, I find a message to call the woman in Personnel on Monday after school?

"I haven't done anything wrong."

Jer nodded agreement.

"They couldn't have found out about your downloads."

Jer really shook his head at that.

"Well, then why do they want to talk with me?"

"Maybe they want to promote you again. Maybe you busted something. Maybe they want a real picture of you so they can do Rocket Girl right."

I slugged him for that one.

It was a long weekend, and Monday at school went forever. I wanted to run home. Jer reminded me that I didn't want to sound breathless on my call. Our walk took us by the Teddy Bear Factory.

When I was a kid, I used to walk in the paw prints some big black bear had left on the sidewalk. Or so my Dad said. I'd walk in them and they'd make me laugh. Now, they were so close together, my shoes reached from one to the next. I walked in them, but they didn't make me laugh.

Jer tried to tickle me. I slugged him. He dodged, and came right back in to tickle me. Between swinging at Jer, and dodging tickles, and not always dodging them, I found a giggle. We ended up laughing together. Oh, Jer's fingers could make me feel good, and not just where he tickled me. I guess we were growing up, closer to that honeymoon suite than the little girl walking in the bear footprints. We headed home, his arm around my shoulder. He was good to lean on. "Everything will be fine," he kept telling me. Most of the time his voice didn't break and I could believe him.

I sat in my kopy kitten for a couple of minutes after I got home, breathing slowly, reminding myself I was a high school student who worked on the Moon. Jer slumped into his chair and pulled out a reader, but I don't think he did any studying.

I dialed. The woman came on immediately. "I'm glad you returned my call so quickly. How would you like to work outside on the Moon?"

I sat there, staring at her, suddenly needing to catch my breath all over again. Jer leaped up from his chair, did a little victory dance ending in a shouted, silent "Yes!"

"Ye . . . Yes," I stammered.

"Good. I thought you would. Your supervisor hates to lose you, but, she figures with all you've been investing in your system, you could use the raise. We're opening up a new dig. It's further out from the base. The regolith is rich in aluminum and titanium. You'll be getting a new dozer. Can you start tomorrow?"

"Yes, ma'am."

"Can you, or the boy next door, give me a new download of your system? We have to make sure there're no incompatibility problems."

Jer raced over to help me. That brought him in view of the woman. "Hi. You are?" she asked.

Jer introduced himself. I was glad he was with me; his enhancements of the standard codes raised a red flag. "Normally, we prefer you to reinstall the original software. That's what we qualified for the equipment. But I know a couple of guys at the lab who'll probably take it as an honor to double-check Rocket Girl and her faithful sidekick's mods. We should have it checked out by the time you get home tomorrow."

She signed off, and Jer and I started dancing around the room. Dad's alarm when off. It shouldn't have. We were close, but we were moving all the time. We bolted for downstairs, to tell Dad the good news and have him reset the alarm system. Dad was still in his shop in what had never been the garage, hunched over a new chip layout.

"Dad, I got a new job. I'm driving a dozer. I'm out on the Moon," I shouted, laughing.

"I knew you would, hon." He looked up, frowned, listened for a second. "The alarm's gone off. Would you go reset it, Nikki. You know the code."

Jer and I headed for the hall closet. The door to Mom's office was closed. I edged it open and slipped my head in. Mom was on the phone. "Dear, could you reset the alarm?"

I did. Maybe my folks *do* trust me.

Driving a dozer on the Moon is totally ace, not at all like driving a delivery bot. Dozers are the biggest, heaviest, most massive piece of equipment that we've shipped to the Moon. You do not take one of them around a corner on two wheels, or more correctly, one tread. Dozers push, pull, drag, drill and mangle regolith. But, since we don't ship anything to the Moon that is any heavier than it has to be, you have to be careful how you push, pull or mangle that regolith, because even a dozer has limits.

Rocket Girl needed a whole new set of sensor feedback subroutines if she was going to be Rock Girl, or Rock Woman, or Rocks-in-her-Head, as Jer suggested, which got him punched. He didn't see that one coming, so for once I did bang him good. So I kissed it to make it well and that took a while, but we got out of the clinch before the alarm went off.

I got busy learning my new machine, and Jer got busy making our kopy kitten better. The big worry for the dozers was pushing or lifting too much in the Moon's weak gravity. If you weren't careful, you could put your dozer on its back. It took time to right you, and your solar collectors usually got damaged. I would be working further out than most, until a second dozer of the D-4 series arrived. Having the first of the D-4's on the Moon was a surprise. I asked why they didn't give it to someone experienced; all of us on the D-4 were new. "Why retrain someone who'd been doing great with the C-3? You might as well learn dozers and the D-4 at the same time." So a couple of dozen of us got the newest toy on the Moon. We also got a full time supervisor to kibitz us for the first week.

Jer didn't mind. He was working on improved feedback loops, something to warn me ahead of time that I was biting off more rock than I could chew. The Moon is close, but when you're lifting too much into a hopper, a two-and-a-half-second delay can do a lot of damage.

But there were benefits to working outside. Have you ever seen a shuttle take off from the Moon? That was something that a wandering rover never caught. I was right under the path for takeoff. Jer cut me into the traffic control channel as soon as I accidentally spotted a shuttle on takeoff. After that, we'd monitor takeoffs and landings; Jer even set up a plot that showed me where to look.

That's how we knew something was wrong even as it was happening.

Nothing on the Moon is silent. My dozer has to talk to me, not just for go right or lift that load, but to tell me what the wear is on the tread so I can call for maintenance before it breaks down. There's a lot of telemetry buzzing around the Moon from anything that's moving. A lander sends an encyclopedia every second. When one quits, the silence is deafening.

"Shuttle five-oh-three, say your status," was not an unusual call. Jer and I factored it into the background. "Shuttle five-oh-three, say your status, we have lost your signal," brought both of our heads around to the comm monitor, me dimming my helmet so I could see the monitor as well as the chunk of Moon I was pushing toward a hopper.

Jer tapped his board several times and most of the communication data disappeared. Traffic Control stood out like a skate-board with three wheels. Three lines crackled with data from lifting and approaching landers. One line wasn't straight. It just wasn't there.

"Did it crash?"

Jer tapped a few times, then shook his head. "No recorded seismic activity. It's still up there, just no signal."

"That's impossible. There's got to be some kind of signal." Dozers and delivery bots might be cheap hunks of dumb metal, but everything man-rated had backups for the backups for the backups. And even those had redundancies built in. A shuttle couldn't just go silent.

This one had.

I checked my dozer. It wasn't in any great risk. I gave it half my attention while the other half was drawn into this drama. It had been five years since the Moon killed anyone. The understanding was that anyone on that lander was there because they wanted to be there. Hell, if Jer and I had a choice, we'd be on that lander. I'd still swap with the people on it. They had a problem. In a minute or two, it would be solved.

The minutes started to stretch. Radars that swept the final approach were redirected to cover a wider search. Someone posted a fuel remaining readout. Landing time became a widening band around the ever-lowering estimate of remaining reaction mass. Jer and I watched without saying a word. Jer lit up all the old monitors we'd retired when I got the helmet, putting different readouts in their windows. Seismic was in the center; if the shuttle hit hard, that would be our first report. Radar, time remaining, somebody's mad search for a boarding list for 503, lots of things was going on. Jer cycled through most of them, selecting the ones we should monitor. We watched, hardly breathing.

The pessimistic estimate of fuel on board came and went with no seismic report. The middle one passed, too. Had they managed to abort to orbit? Could they be found up there, rescued? That might be worse than hitting hard. There was a slight blip on seismic before the optimistic fuel guess hit bottom.

"I think they're down," Jer said as someone in Traffic ventured the same guess.

"Where?" I was echoed from a dozen different stations.

Jer just shook his head. "I don't know," came from a monitor. "Seismic?"

"We have an event. It probably was them . . . ah . . . landing. It's pretty faint. We've got a circular error of probability over twenty miles wide."

"Where's it centered?"

"Right over Diana Base."

"Shit," was a grownup's comment. Jer and I echoed it.

"Why's it so weak?" I asked.

Jer shook his head. "Maybe they hit light. Maybe they hit glancing. Maybe the rock they hit or some rock between the recorders and them doesn't carry sound so well." Jer shrugged. "The seismic stations weren't designed to locate crashes."

"What do we do?" I bet a lot of people were thinking that.

Jer just shook his head. "There's nothing you and I can do. If someone sends your dozer out to search, you go. Otherwise, I guess you move rock."

I checked. Yeah, I was ready to dump this load into the hopper. I did, then turned the dozer back out to find another bit of Moon. While I did that, I did a full maintenance review. D-4 was as ready as she could be.

"Help us. Can anyone help us?" A girl's voice came from one of the commercial channels. Her portable computer's camera must have lost its auto-focus. She was a blurred image in the near field. I tried to make sense of it.

"She's in a spacesuit!"

Jer ran a filter program. Yep, a girl in a pretty pink spacesuit; the helmet had an expensive starburst logo on it.

"Who is this," came an urgent voice.

The first name I didn't get. The second was known through out the world. Her Dad could afford to send her to camp on the Moon. Hell, he could damn near afford to buy her the Moon.

"Where are you?"

"I don't know. The lander did all kinds of crazy things before we hit."

"Is your hull breached?"

"A guy had his face plate smashed. He's dead."

"Stay on line. Help is on the way."

"I'll try." And her signal vanished.

"Where'd she go?"

"It was a miracle her computer survived as long as it did," Jer muttered, rewinding the scene. "Where are you, kid?" he asked the monitor.

"They can track the signal."

Jer waved at the monitors. "They're trying. They only have three relay satellites. Only one was overhead when they got her message."

"So?"

"So, the cell phone on her computer could have been anywhere within one hundred and fifty miles of Diana Base."

"Oh. That's no help."

"Yeah, but maybe this is." Jer had pulled up the backdrop of her picture. It was in focus. Through a rip in the lander's skin two mountains stood out. One had a pair of craters half way up it that almost looked like eyes. The other had twin peaks of equal height.

"Seen those before?"

"I don't know."

"Neither do I, but we've got an awful lot of rover video. We can limit the search to twenty miles of Diana base."

"Forty," I said. "You don't know whether her camera was aimed in or out."

"Fifty it is." He did a quick search on our database of pirated rover video. "Looks like we got most of that ground covered. I can do a simple match, easy code with no risk I'll blow it, but we'll need a lot of computer power. Do you think you could. . . ."

"Ask my folks!" That would mean telling them what we'd been doing. Where we had it stored! Everything! "What about your folks' computers? They're not home."

"Our home computers are lame. I'll use them, but your Dad and Mom's are the real power here. Beside yours."

D-4 was headed out. It wouldn't need a baby sitter for a few minutes; I raced down stairs. "Mom! Dad!" I shouted. "We have to talk. It's a matter of life and death—and this time, it really is."

Even with that for an opener, it took a while. I had to drag Mom out of her office down to Dad's shop. Whose daughter was lost on the Moon got the kind of sad parent nods I expected. Then I took a deep breath and told them how Jer and I might be able to save her.

Dad nodded. "Good approach. I wondered why the house system took so long to cycle from winter to fall this year. Should have suspected it was a full disk."

Mom's eyes just got big.

Dad headed upstairs, Mom and me following. He didn't juggle Jer's elbow, just looked over his shoulder, lips tight and his mouth getting smaller as he chewed on his lower lip. Finally Dad nodded. "Good code. Download a copy of what files are where. Honey, network speed is going to be a problem here," he told Mom. "You set up a schedule for shipping the files over the net. Things will work faster if all the files a computer is processing are on it when we kick it off. I'll go see how much disk space I can create on each system."

"Yes, love." Mom headed down stairs without even a glance back.

No matter how long you live with people, you will never guess what they'll do next.

For the next hour, I went back to moving regolith. The search centered on the other side of Diana base. The main assumption was that the shuttle had lost attitudinal controls but the pilot had succeeded in steadying things down and used the last of his fuel to land them somewhere in the approach path, so most of the search units were there. Dad and Jer agreed that since it had stayed up past its usual fuel limit, it had probably kicked itself up and gone long. The gentleness of its landing bothered both of them. Mom biased the search for long and I edged my dozer out as far as I could put it.

"Dozer D-4, join the search. Swing wide and search to the south. A map appeared on my heads-up, a blue-hatched area marking out a large chunk of landscape to the south and east. I wanted to go west. But I could go south for a while.

"I will proceed down Claudette Valley and cross over at pass 4R."

"Do it."

I did it as slow as I dared. "Jer, I've been drafted into the search." I showed him where. All he did was frown. "Mom, can you speed it up any?"

"No, honey, the poor 'puters are chewing as fast as they can."

"I'll start dumping negative files," Dad put in. I reviewed my status board. D-4 was cool, ready for anything. The sun was getting low. I edged the solar collectors over as far as they'd go. When the sun was down, D-4 would recharge from central power. That kept us fairly close to base. During the day, I had more freedom to pick and choose my rocks. If they'd crashed twenty miles from the base in a few more days, there was no way we would have been able to search for them.

"I've got a hit," Mom shouted

"We found them," Jer said, fingers flying over his keyboard. A new window opened up on my heads-up. A pile of rocks filled it, looking nothing like what I'd seen in the background of the girl's message. As Jer's fingers clicked on keys, it rotated. There were two eyes on one of them. And yes, the other mountain divided into two peaks.

"You did!" I yelled.

"But where?" Dad and Jer muttered in the same low voice. The mountains settled onto my map, a line extended from them, going longer and longer. I checked. Exit 3L would get me headed that way. I gunned my dozer, moved the tread condition window up where I couldn't miss it when I looked out, and reangled the solar collectors to correct for my direction. I figured I had five, maybe ten minutes before my new course was noticed.

"Dad, you better call the Moon."

"I've been trying, princess. All the circuits are busy."

Who else could I call? I punched the number for the woman in Personnel. It was answered almost immediately.

"I'm sorry, I'll have to call you back."

"No! This is Rocket Girl and we've found the lost lander."

Her jaw gapped. "You found them?"

"Billionaire's daughter and all. It was lander 503."

"Yes. How?"

"We matched rover images from the Moon against the background in her picture."

"You what? You couldn't. . . ." She glanced away from the camera, her face a puzzle. "You, and the boy next door. You'd need a lot of video."

"We've got it."

She was running her finger down something off screen. Her head began to nod. "You probably do. Yes. I'll get back with you in a few minutes. Stay close."

"I'm on shift."

She glanced off screen again. "Not for long."

I'd been ignoring the clock. Looking at the seconds ticking away made me think of oxygen going stale. Oh lord, I was almost off work. "Please, get back soon."

She was gone. I concentrated on driving. Now was no time to pitch into one of the little craters or smash a tread on a rock. I upped the magnification on the forward camera, edged the side ones around forward as far as I could.

"Hi," came the cheerful voice of my replacement. "I'm here. You got a date tonight?"

"A lander's down. I think I know where. I've got to keep working." I shot back.

"I heard about the lander crash. Have they hauled even the D-4 into the search?" She hadn't heard me.

"Listen, my boyfriend and I figured out where they are. I'm headed there right now as fast as I can put treads down and pick them up."

"You're Rocket Girl."

"Some people call me that."

"They told me you were good. Can I come along?"

"Don't juggle my elbow." She didn't answer. Smart girl.

"D-4, you are off your course. Get the hell where we told you to be."

"This is Rocket Girl, I've found the lost lander and I'm going to get them."

"Oh shit, kid, your shift is over. You're out of here. I'll see you fired later. Where's your replacement?"

"I'm here, sir," came a timid squeak.

"Take over."

"She will not take over. This is Rocket Girl's Dad. I have been monitoring this rescue effort as well as my daughter and her boyfriend's effort. We have a 95 percent probability of having identified the crash. You pull my daughter off this and you are signing the death warrants for six people."

Dad didn't say who. Dad is good when he gets definite mad—so long as it's not you he won't let go to a band concert. I dodged a rock, aimed around a slight hillock. My speed was edging into the red on both tread and velocity.

"Wait one while I talk to my boss." The voice from the Moon cut off. I drove.

"This is Rescue control. I understand I have Rocket Girl and company on line."

"I'm her father."

"Personnel just passed me her file. Your kid has accessed a lot of controlled video. Were you aware of that?"

"Not before today. I'll ground her tomorrow. For now, we got some people to save."

"Don't ground them," Jer and I exchanged a hasty glance at the plural. "Every one of the guys working for me cracked our lock-outs when they were kids. I wouldn't have hired 'em if they hadn't. You ran a search on that imagery."

"Yes. You can check Jerry's code later. For now, I'm passing you through the results." Dad waved at Jer; he started tapping. The search results reappeared on my heads up. I passed them up to the Moon.

"Damn, that is the backdrop. Why didn't I think of the background. Too damn long since I spent some time on a rover. Folks," he hollered, "turn those rigs around. We're headed in the wrong direction. Where do you think they are?" he asked in a normal voice.

"Somewhere along that axis," Dad said.

"But where? I'll have a satellite overhead in about five minutes. We've got it ratcheted down to half meter pixels. Nice picture but not very big. Any suggestions?"

I stared at the picture. The girl would probably have the latest computer stuff. Camera was probably as good as the one on the newest rover. I called up the height of those mountains, gauged their base against that, tried to estimate that against some of the distances I'd driven on the rover—No, on the D-4.

I took a stab at the monitor's map. "Somewhere around there." Jer shot him the coordinates.

"That is where we'll take our picture," came back.

I kept picking up treads and putting them down. It was time to climb a hill. I took advantage of a shallow valley to put my speed well into the red. D-4 was a good old girl. I could hear her throbbing under me, shaking my seat just a little bit. "That last upgrade's working real good," I smiled at Jer. He grinned back. D-4 was a greased skateboard. I was rad. We were one.

My hands were starting to tire, and my back was aching when the photo flashed on my heads up. It was in stereo so I could see the hills and valleys. There was a long streak down a hill, ending with a wide swath where the shuttle had rolled sideways the last hundred yards.

"He ditched it on the downside of a hill," Dad's voice held solid admiration.

"That he did," said Rescue Control. "We make out four sets of footprints walking away. They were here," a circle appeared on the picture, "when we were overhead. If they keep walking in that direction, you should meet up with them about here." That was an X.

We were covering two long sides of a triangle. "Would be better if we met in the middle," I said.

"We can't raise them."

"Maybe I could get their attention," I said. When you work around Moon dust and rock, you learn not to make it fly. The less in the hopper, the less that goes back to the refineries. But when you're learning, it takes a bit of getting used to. I thought it was kind of cool to make the dust fly until my supervisor pointed out the economics of it.

"Jer, plot me a line of sight to them."

It took him a minute. "It looks to me that when you top the next real rise, they might be able to see you." I'd never heard Jer so circumspect. Then, this was the first time lives depended on him. A moment later, "we concur," came from Rescue Control.

I only wanted a little dust in my hopper, definitely no rocks. I couldn't slow down to collect it. Little by little, I lowered my front loader. The readout said I picked up a little here, little there. My seat was rocking as I went along. Seat and front-loader cargo load agreed. I lifted the hopper when I had about a kilo of dust. Going up the last few meters to the crest, I gunned it, trying to coordinate putting the loader against its top stop just as I bounced over the ridge crest. With luck, I'd just sent up a dust plume only a blind man would miss.

There was no way to know if I had.

Next highpoint, I did the same. I paused after sending off my dust signal at the third highpoint. While my solar collectors drank in what they could of the setting sun, I searched ahead of me. It didn't look like they were where they would have been if they'd just kept walking. About where they might have been if they changed direction on my second signal, I picked up a long line of dragged feet down a hillock. The line pointed right at me. I took a bearing and floored it. D-4 bucked and shuddered under me, but she went.

"How long?"

"Maybe a half hour," came from Jer and Rescue control.

"How long before someone else with oxygen gets here?"

Jer shrugged. Rescue didn't answer.

They were a dusty, bedraggled group that D-4 rolled up to thirty minutes later. A slim figure in a pink spacesuit did an excited jump, hands clapping, followed by a slow landing. I hoped someday I'd get to meet her. They stared at D-4 like it was something out of a dream. D-4 had never been designed to be ridden. Maybe I'd just lead them back.

However, D-4 did have to be worked on, so there was a plug-in for a diagnostic computer. Pink spacesuit had not ditched her pet computer, but plugged it right in.

Her "Is anyone there?" was plaintive.

"The whole world, honey."

"Daddy!"

"You didn't think I wouldn't be?"

"Daddy, we're low on oxygen and these suits are hot."

"People are coming. They'll be there real soon. How long have you got, baby ducks?"

"Forty-five minutes. Maybe an hour."

I glanced at Jer. He'd started tracking rescue assets. He had them arrayed on a screen as green triangles. They looked awfully far off. He looked up at my Dad. The two of them shook their heads. "Two hours, hour and a half at best," Dad said.

A shudder went through me. These people were going to die. I would sit here safe in my Mom and Dad's home and listen to a girl my age gasp for air while her Dad, who loved her as much as mine, had to listen helpless. This was not why I wanted a job on the Moon.

"Baby, that machine that found you. You could ride it. It would bring you closer to the rescue teams."

There as a quick shake of the pink helmet. "Dad, the pilot died getting us down. I watched a passenger die, too. We are not separating. This is not one of those times when having your name makes me special. It's all of us, or none of us."

Behind her, three standard-issue spacesuits had their helmets together, talking. Pink suit backed away. "I won't. It's all of us, or none. I'll run away. You can't make me."

"Enough of this horse-pucky," I shouted in what I hoped was a grown up voice. "This is Rocket Woman, and I run this track you're hanging around. All four of you pile on."

I checked the sun. It was down for the next two weeks; all we had was earthlight and stars. "You can rip off the solar cells, or ride on top of them. They ain't gonna do us any more good this trip. Baby ducks, you ride in the hopper. Doubt if you'll unbalance me much. Come on, get a move on."

I guess I did sound grown up. They moved. I started powering down everything I didn't need: head lamps, running lights, rear camera, side ones, too. Any diagnostic that wasn't a showstopper, off. Jer helped. Only those that gave me a feel for the ride were kept on.

Under the weight of four people, D-4 drooped. I put her in gear slowly. My skateboard waddled. Relying on only the front wheels to give me a feel for the bumps, I turned off the rear system. It had to move to get juice now.

I followed my trail back. That made things easier since I was three-quarters blind. My eyes kept flitting to the larger map. Where was I? How close was a rescue team? One was pulling ahead of the other. Probably had a driver as crazy as me. Or maybe they'd been ordered to push now and ride home with someone else. I didn't hear the message. I didn't need to know.

I concentrated on "feeling" D-4 and what lay ahead of us.

"Listen, Rocket Woman or whoever you are, I've got to talk to my daughter." It was pink suit's dad.

"Mister, I've turned off everything that doesn't make my tracks go down and up. That includes voice radio. Do you want to see her again, or talk to her now?" I couldn't believe I said that.

Dad rested a hand on my shoulder, squeezed. Mom was crying.

If I didn't pull this off, I'd try to save enough juice to let them talk at the end.

We topped a rise. It was dark. A long downhill run was ahead of us. I could power it, or. . . . I popped on one headlight and eased up on the throttle. With all the extra weight, D-4 picked up speed fast as it headed downhill.

"You're gonna need axle travel," Jer whispered.

"Give it to me."

He started tapping. My seat began to bounce under me. Speed built up. Jer cut in the rear axle feedback. "Give me more lights." He did.

Coming up this hill I'd zigged and zagged around small craters. At this speed, with this load, zigging was out of the question and if I hit one of those craters, D-4 and four people would be rolled up into one big mess. If I hit the brake, this was all for nothing. I raised the lights, focused the camera further out and let the seat of my pants pick a new path down full of gentle curves.

"Am I really saving any electricity?"

"You're on the plus side, Nikki," Dad answered. "Jer can run you the numbers when this is over. Trust your gut."

Dads can be wonderful.

I reached the bottom of the hill, feeling like I was five years old again and on my first skateboard. Rolling on and on, I "S" curved around rocks and craters as I slowed. I killed first one lamp, then another. Jer took the axle feedbacks off line. D-4 and I lumbered around several hillocks and began the long trudge up the next ridge.

"You've used thirty minutes," Dad said. "You've got one, maybe two, valleys to go."

It took forever to reach the crown of the next ridge. As I crested it, there was a beep in my ear. "Battery low," a computer voice told me.

"Kill that warning, and its readout from D-4."

Jer did.

We started to roll downhill. I limited myself to one light, and only the front-axle feedback. There was a thump, thump in the right tread, and D-4 was edging that way. Poor old girl was coming in lame. I gritted my teeth and steered for the valley, curving round rocks and craters as gently as I could. Not all of them, I bounced through a two-foot-across pothole, then managed to straddle a rock I didn't see until too late.

Steering got rough. Without my asking, Jer activated the rear axle system. Left side didn't come on. I swallowed hard, and kept going.

"Rescue Four is over the crest. Can you see her lights?" Rescue Center wanted to know.

"We're a tad busy at the moment," Dad answered for me. "Suggest they look for her lights."

"Rescue Four has D-4 in sight. Can you steer for them?"

"Which direction?" I got out through clenched teeth.

"Left, ten degrees," Jer said.

I turned left a bit.

"A bit more."

I did.

"That's good."

All I could see was a splash of light on a gray careening surface. I raised the headlamp, risking close in to avoid what was far out. I dodged a crater I hardly saw. A rock took D-4 full on the front, I hoped it missed Pink Suit.

I was at the bottom, losing speed. Losing it too quickly. Something was really wrong with D-4. I picked up a slash of light a bit off to my left and far ahead. I tried to aim toward it. D-4 did not want to respond. I gave her more of the joystick and got a bit of a turn. D-4 and I slowed to a crawl as another rig, bubble top showing human forms within came up to us. The last feeble rays from my headlamp died as my camera blacked out.

D-4 was stone-cold dead on the Moon. I was trembling in my room, Mom, Dad, Jer around me. I just sat at my control station, too spent to even get up. Jer offered me a hand, helped me to my bed. I collapsed. He sat down on my bed beside me.

And the alarm went off.

"I'll take care of that," Mom said.

Dad came over to kneel beside me. "You did very good, young woman. Very good. Both of you. Tomorrow, you'll have to tell me all about what happened."

"We will," Jer assured him.

The phone rang. "I expect I know who that is," Dad said and tapped the speaker phone. "This is Rocket Woman's Dad, and we may owe you an apology," he began.

"I'm the one who owes you more than a father can pay," was the caller's answer. "They have my daughter in the rescue rig. All four of them. Rescue Four now needs rescuing, I am told," he chuckled. "I believe my daughter would like to meet you daughter once she gets back here."

"I think that can be arranged." Dad said.

"Good. Until then?"

"Yes."

Jer and I went to school the next day, as much to see our friends as to get away from the cameras and ringing phones. For the same reason, or so we told ourselves, we cut out before our last class, taking a roundabout way for our walk home. Not so roundabout that I missed the Teddy Bear Factory.

We stared at the bears in the window. "I'm sorry, Nikki. They don't have the one you want," Jer said, real sadness tingeing his voice.

"Well, Mr. Jerrold Wolfgang Ebdon, we will just have to have them make a teddy bear in a space suit."

"Riding a rover," he finished my usual want list.

"Nope. Riding a D-4 loader. Rocket Woman will not settle for less than exactly what she wants."

Jer opened the door for me, and together, we went in.

"A Day's Work on the Moon" by Mike Moscoe, copyright 2000 by Mike Moscoe, used by permission of the author.

About this Title

This eBook was created using ReaderWorks™ Standard, produced by OverDrive, Inc.

For more information on ReaderWorks, visit us on the Web at "www.readerworks.com"

