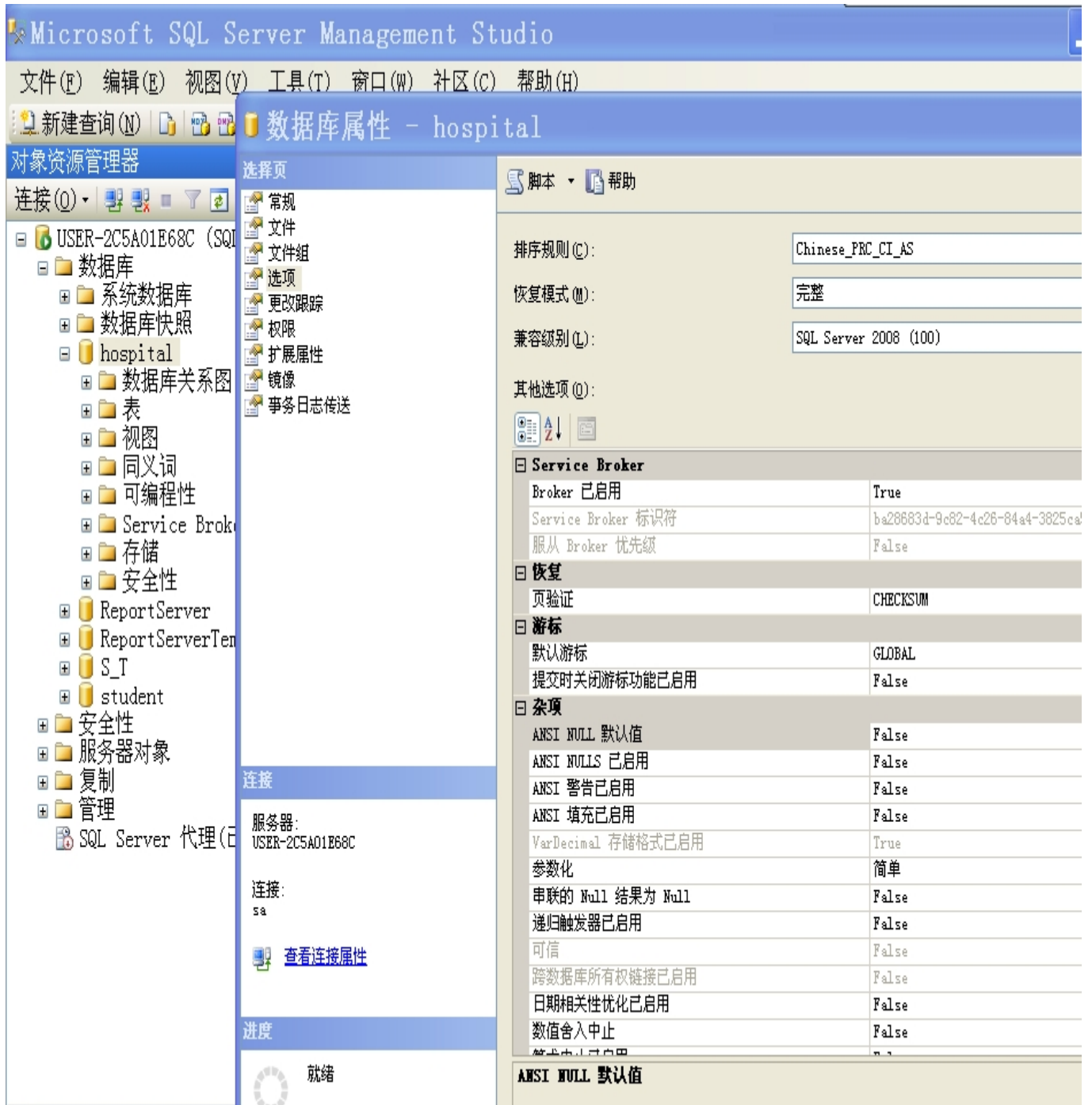


数据库备份与恢复操作界面及示例

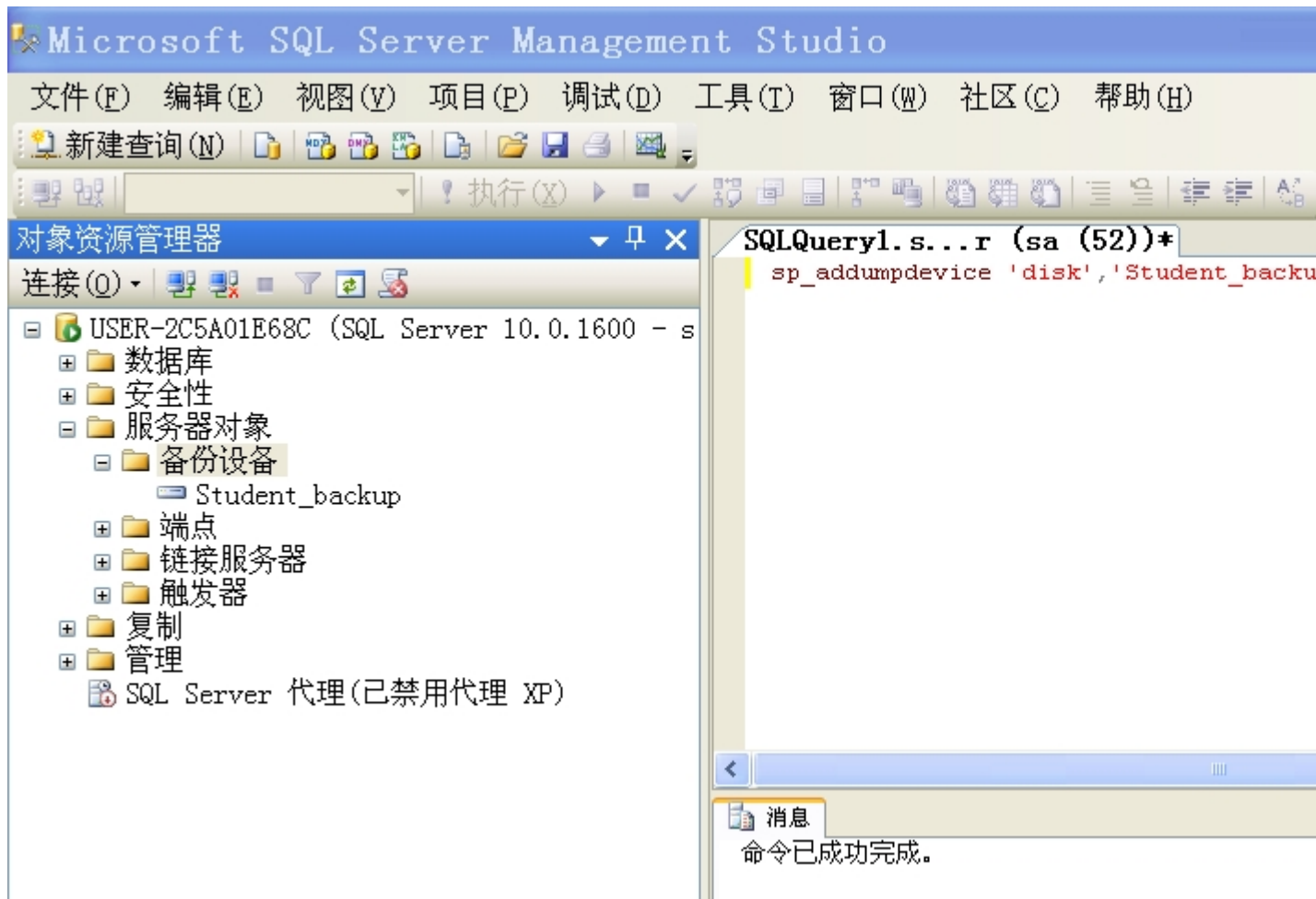
一、 设置恢复模式

在要设置恢复模式的数据库名上右击鼠标，在弹出的菜单中选择“属性”命令，在弹出的属性窗口中，单击左边“选择页”中的“选项”选项，将数据库恢复模式设置为完全模式。



二、 创建备份设备

EXEC sp_addumpdevice 'disk','Student_backup','d:\data\student_backup.bak'



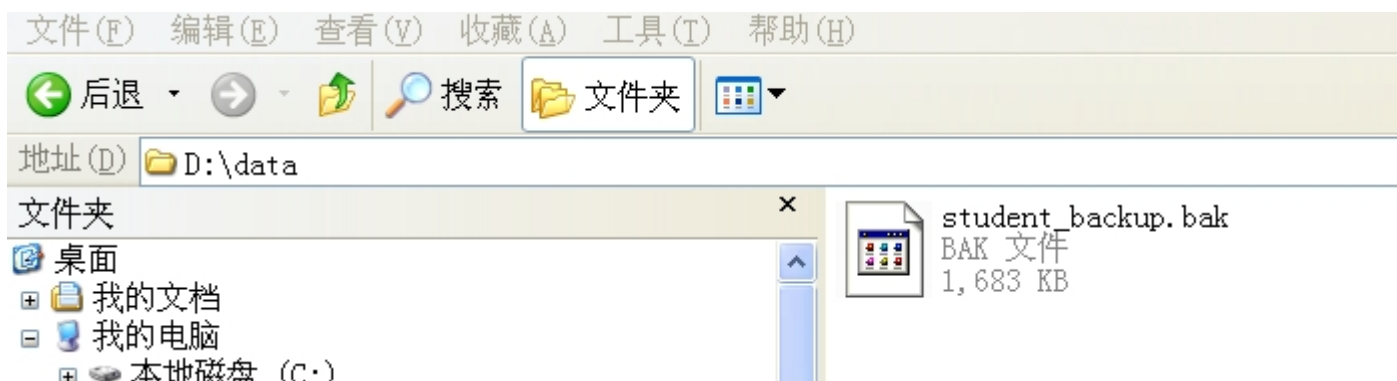
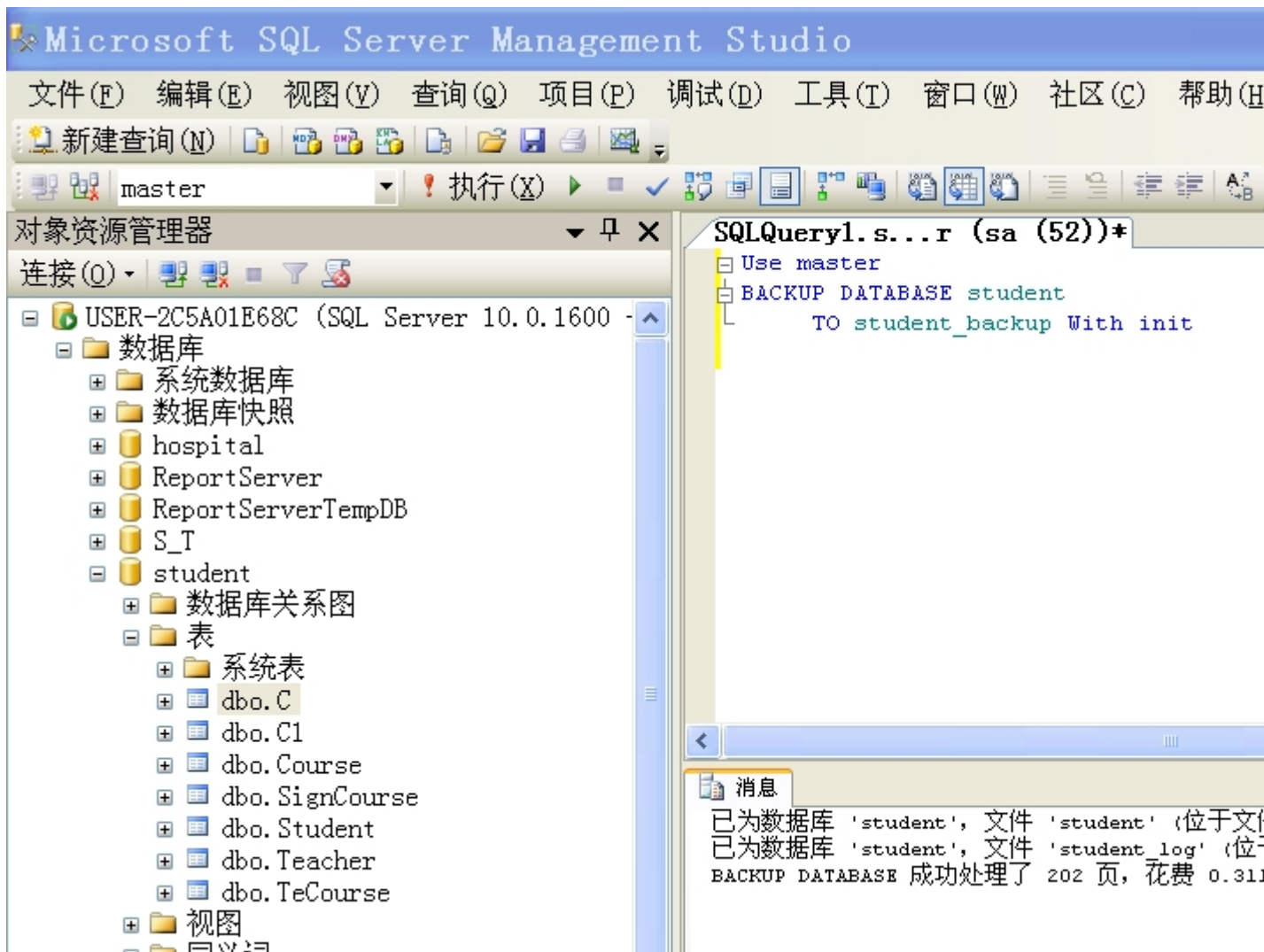
三、 数据库备份操作

1) 完整备份与恢复 (状态 A,, 完全备份点)

为 student 数据库创建一个完全数据库备份,将备份保存到 tudent_backup 备份设备上。

Use master

BACKUP DATABASE student TO student_backup With init

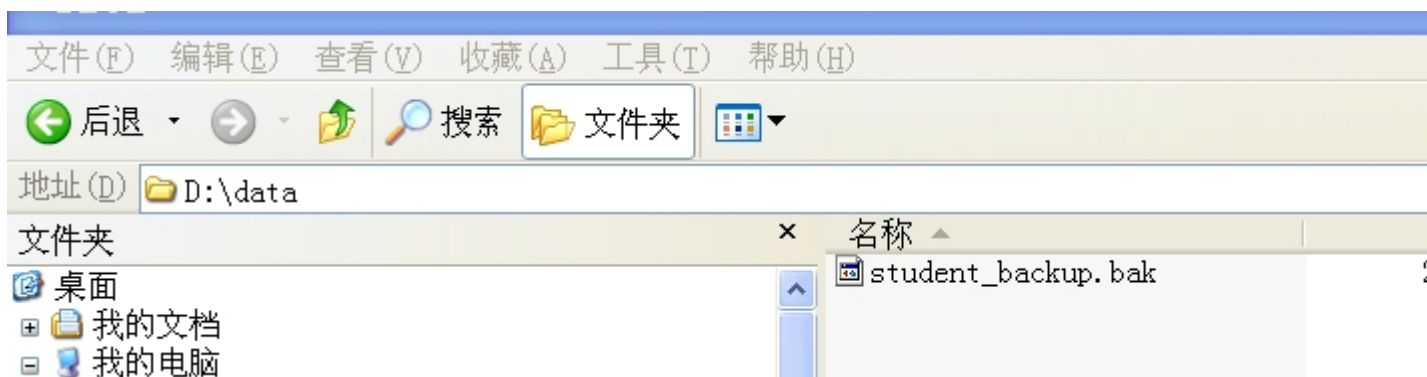
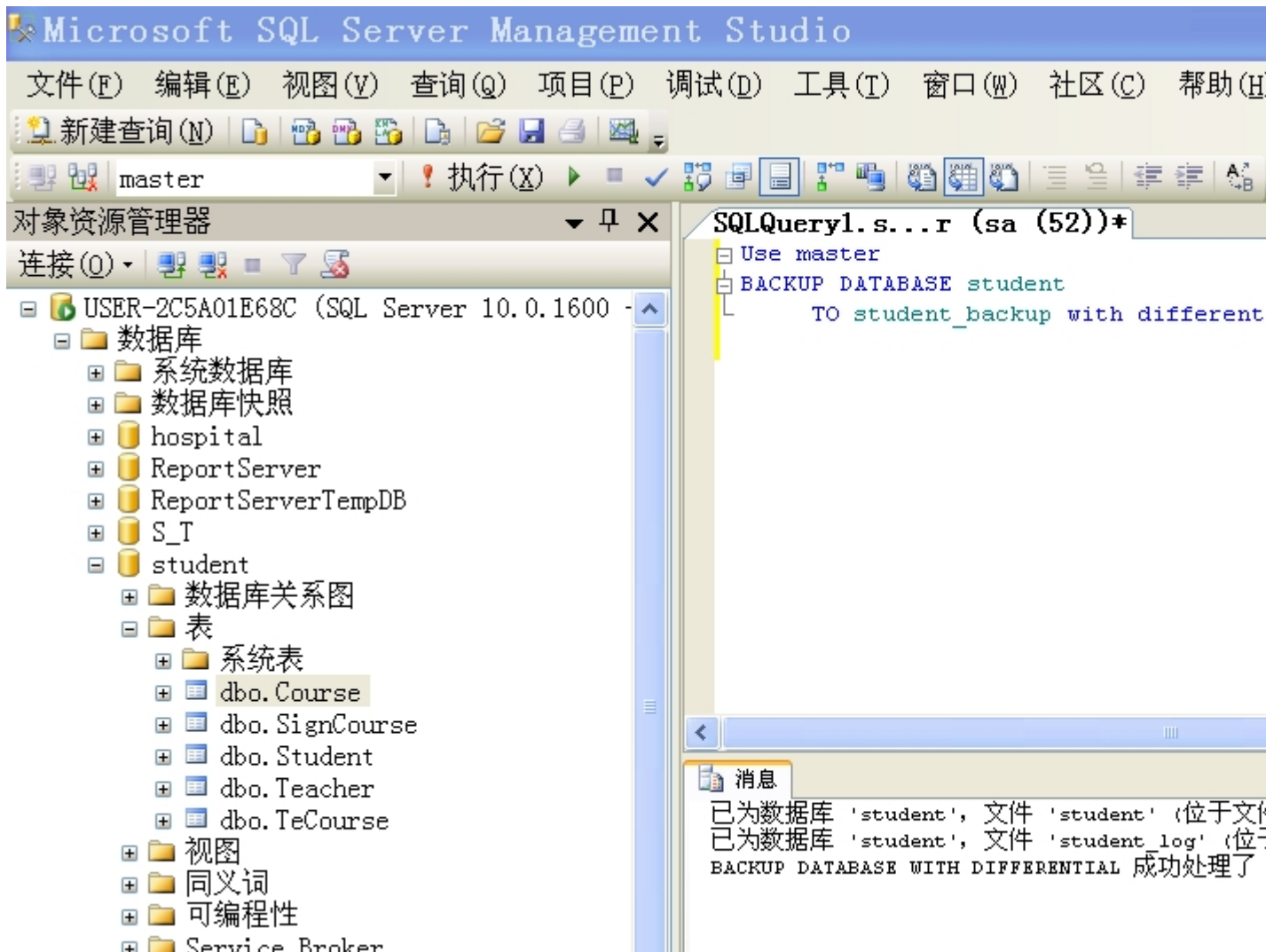


2) 差异备份 (状态 B, 差异备份点)

1. 删除 **student** 数据库下的 **C** 与 **C1** 两张表
2. 为 **student** 数据库创建一个差异数据库备份, 将备份保存到 **tudent_backup** 备份设备上。

Use master

BACKUP DATABASE student TO student_backup with differential



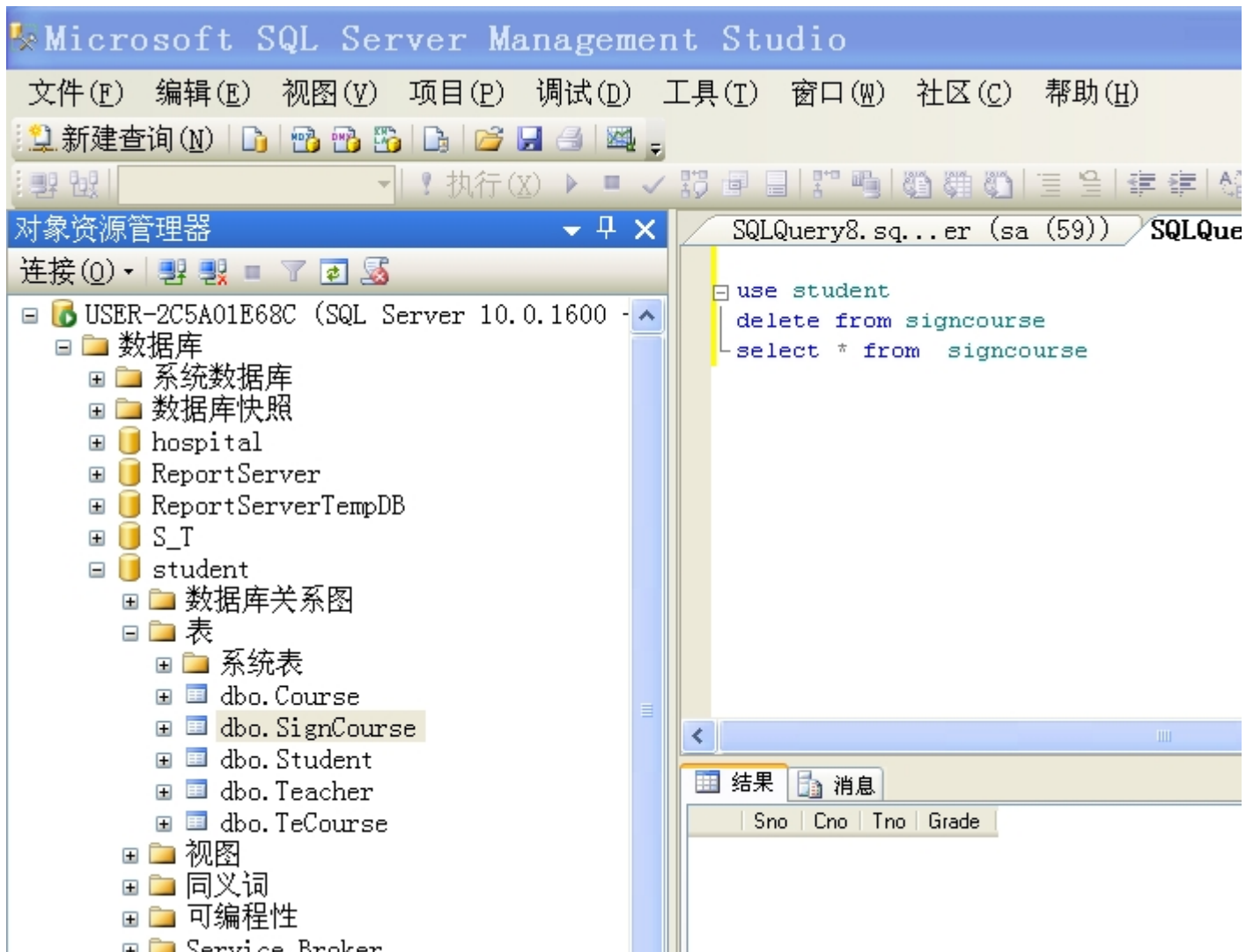
3) 日志备份 (状态 C, D 日志备份点)

1. 删除 STUDENT 数据库中 signcourse 表的所有记录数据

```
use student
```

```
delete from signcourse
```

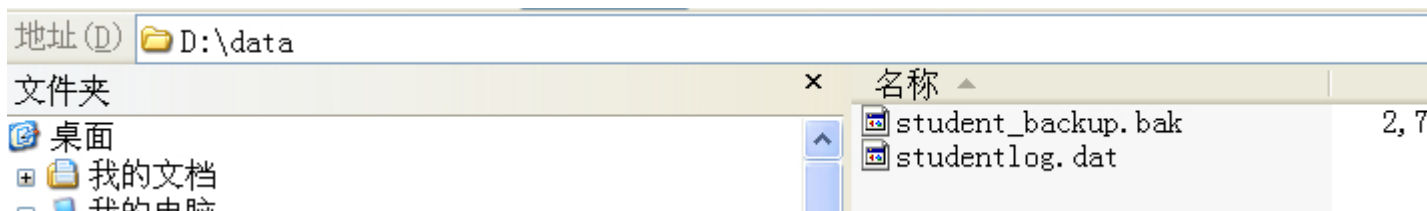
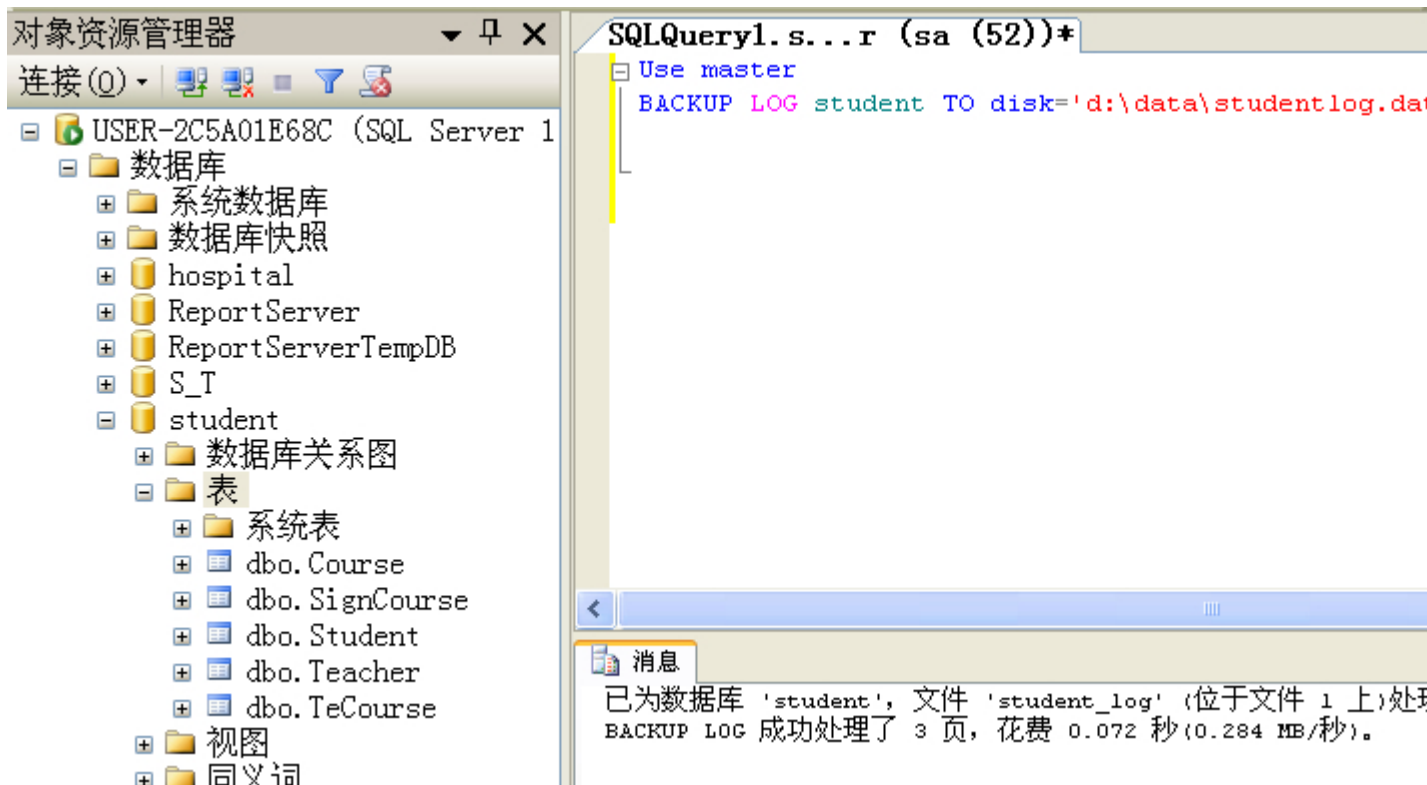
```
select * from signcourse
```



2. 使用 BACKUP LOG 命令进行事务日志备份 (状态 C, 日志备份点)

Use master

BACKUP LOG student TO disk='d:\data\studentlog.dat' WITH INIT



3. 创建 STUDENT 数据库中 signcourse 表的数据 (状态 D, 故障点)

Use student

```

insert into SignCourse(Sno,Cno,Tno,Grade) values('031002222','001','60109',88)
insert into SignCourse(Sno,Cno,Tno,Grade) values('031002222','002','23904',76)
insert into SignCourse(Sno,Cno,Tno,Grade) values('031002222','003','82010',89)
insert into SignCourse(Sno,Cno,Tno,Grade) values('031002222','004','04021',98)
insert into SignCourse(Sno,Cno,Tno,Grade) values('031002222','005','30321',63)
insert into SignCourse(Sno,Cno,Tno,Grade) values('031002222','006','09212',54)
insert into SignCourse(Sno,Cno,Tno,Grade) values('031002222','007','90321',67)
insert into SignCourse(Sno,Cno,Tno,Grade) values('031002222','008','89743',87)
insert into SignCourse(Sno,Cno,Tno,Grade) values('031002314','001','88005',89)
insert into SignCourse(Sno,Cno,Tno,Grade) values('031002314','002','23904',87)
insert into SignCourse(Sno,Cno,Tno,Grade) values('031002314','003','82010',84)
select * from SignCourse
  
```


The screenshot shows the Microsoft SQL Server Management Studio interface. The left pane displays the '对象资源管理器' (Object Explorer) for the 'student' database. The tree structure includes '数据库' (Database) > '数据库系统图' (Database Diagrams) > '表' (Tables) > 'dbo.SignCourse'. The right pane shows the 'SQLQuery1.sql' script with the following content:

```

insert into SignCourse (Sno,Cno,Tno,Gr
/*11*/
insert into SignCourse (Sno,Cno,Tno,Gr
insert into SignCourse (Sno,Cno,Tno,Gr
insert into SignCourse (Sno,Cno,Tno,Gr
insert into SignCourse (Sno,Cno,Tno,Gr
insert into SignCourse (Sno,Cno,Tno,Gr
insert into SignCourse (Sno,Cno,Tno,Gr
insert into SignCourse (Sno,Cno,Tno,Gr
insert into SignCourse (Sno,Cno,Tno,Gr
select * from SignCourse
  
```

Below the script, the '结果' (Results) tab shows a table with 11 rows of data:

	Sno	Cno	Tno	Grade
1	031002222	001	60109	88.0
2	031002222	002	23904	76.0
3	031002222	003	82010	89.0
4	031002222	004	04021	98.0
5	031002222	005	30321	63.0
6	031002222	006	09212	54.0
7	031002222	007	90321	67.0
8	031002222	008	89743	87.0
9	031002314	001	88005	89.0
10	031002314	002	23904	87.0
11	031002314	003	82010	84.0

4. 备份并恢复到日志备份点（状态 C）

先退出管理界面，再次登入平台，之后执行以下恢复操作。（有时需要这样）

首先 BACKUP LOG 命令进行事务日志备份，并截断日志，之后备份完全备份，差异备份与日志备份。

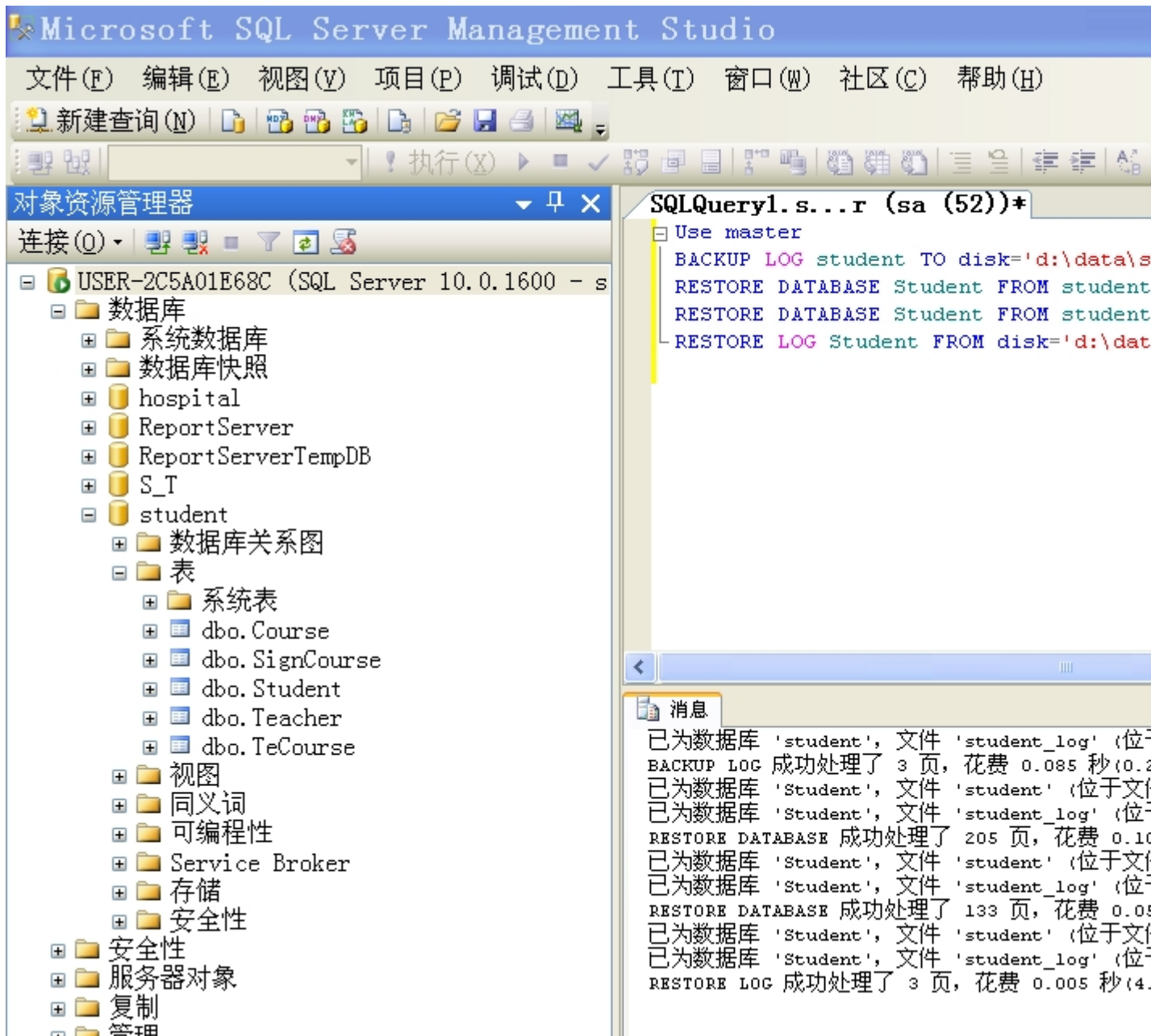
Use master

BACKUP LOG student TO disk='d:\data\studentlog3.dat' WITH INIT, NORECOVERY

RESTORE DATABASE Student FROM student_backup WITH FILE=1, NORECOVERY

RESTORE DATABASE Student FROM student_backup WITH FILE=2, NORECOVERY

RESTORE LOG Student FROM disk='d:\data\studentlog.dat'



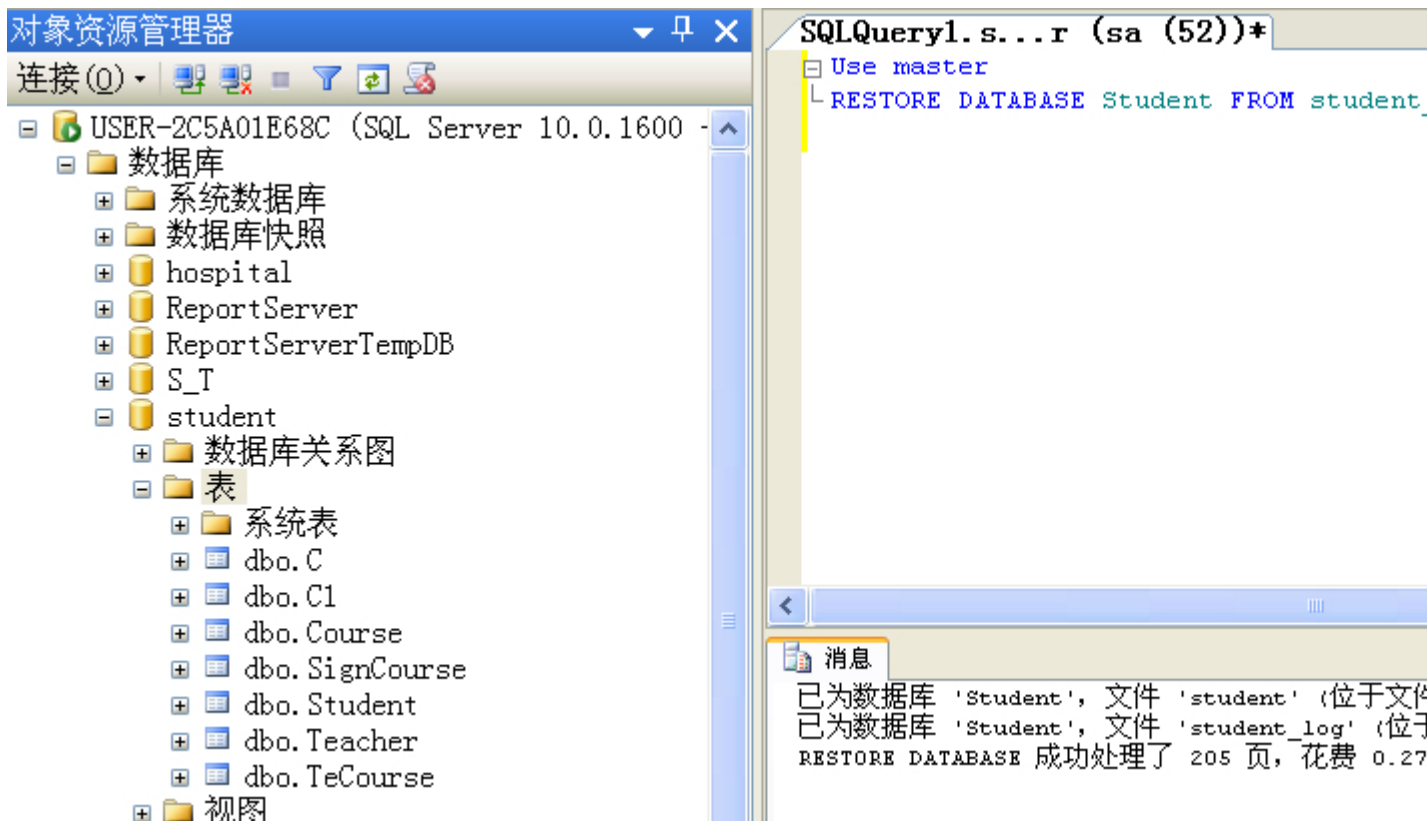
四、 数据库恢复操作

1) 恢复到完全备份点 (状态 A)

先退出管理界面, 再次登入平台, 之后执行以下恢复操作。(有时需要这样)

Use master

RESTORE DATABASE Student FROM student_backup WITH FILE=1, REPLACE



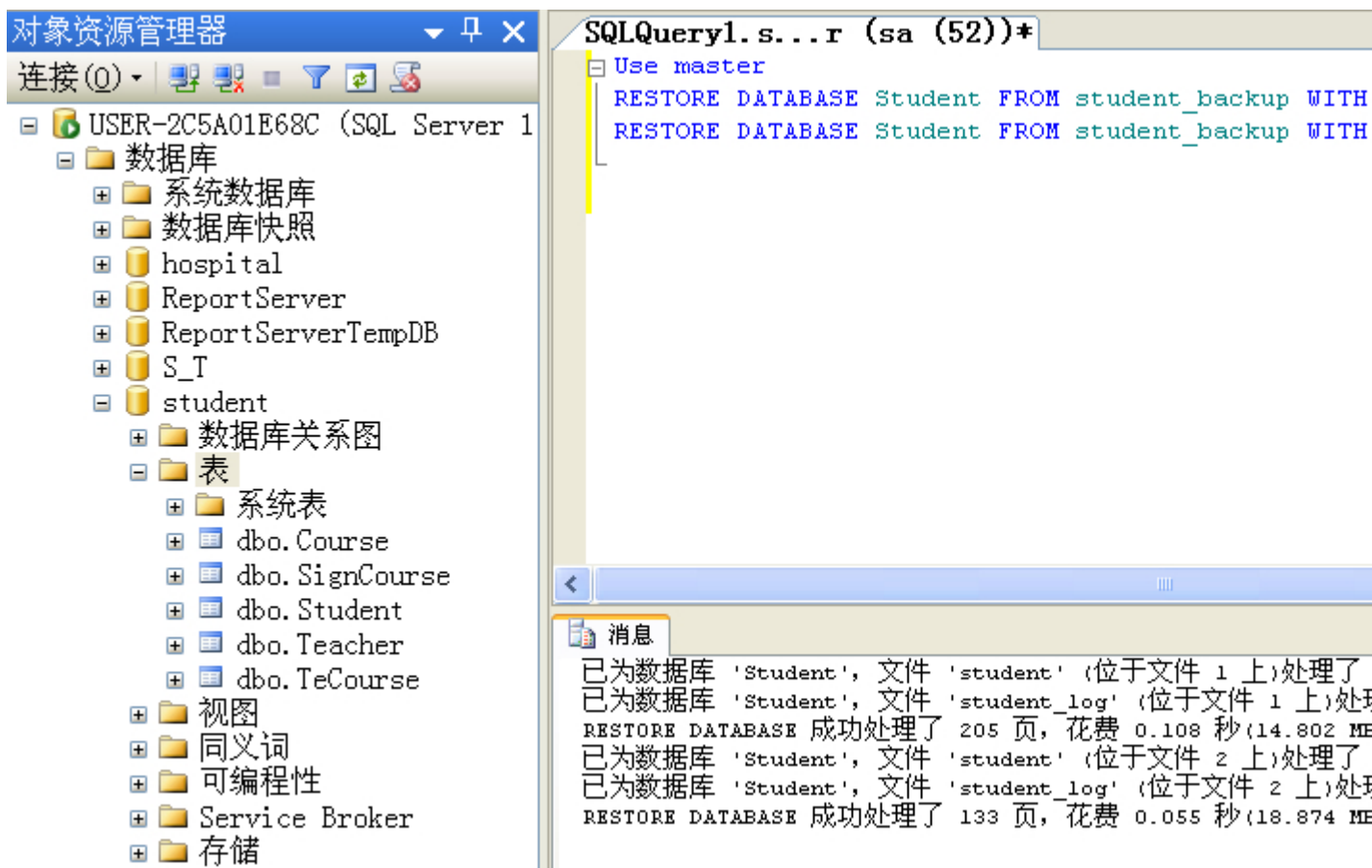
2) 恢复到差异备份点 (状态 B)

先退出管理界面, 再次登入平台, 之后执行以下恢复操作。(有时需要这样)

Use master

RESTORE DATABASE Student FROM student_backup WITH FILE=1, **REPLACE, NORECOVERY**

RESTORE DATABASE Student FROM student_backup WITH FILE=2



3) 恢复到故障点 (状态 D)

先退出管理界面, 再次登入平台, 之后执行以下恢复操作。(有时需要这样)

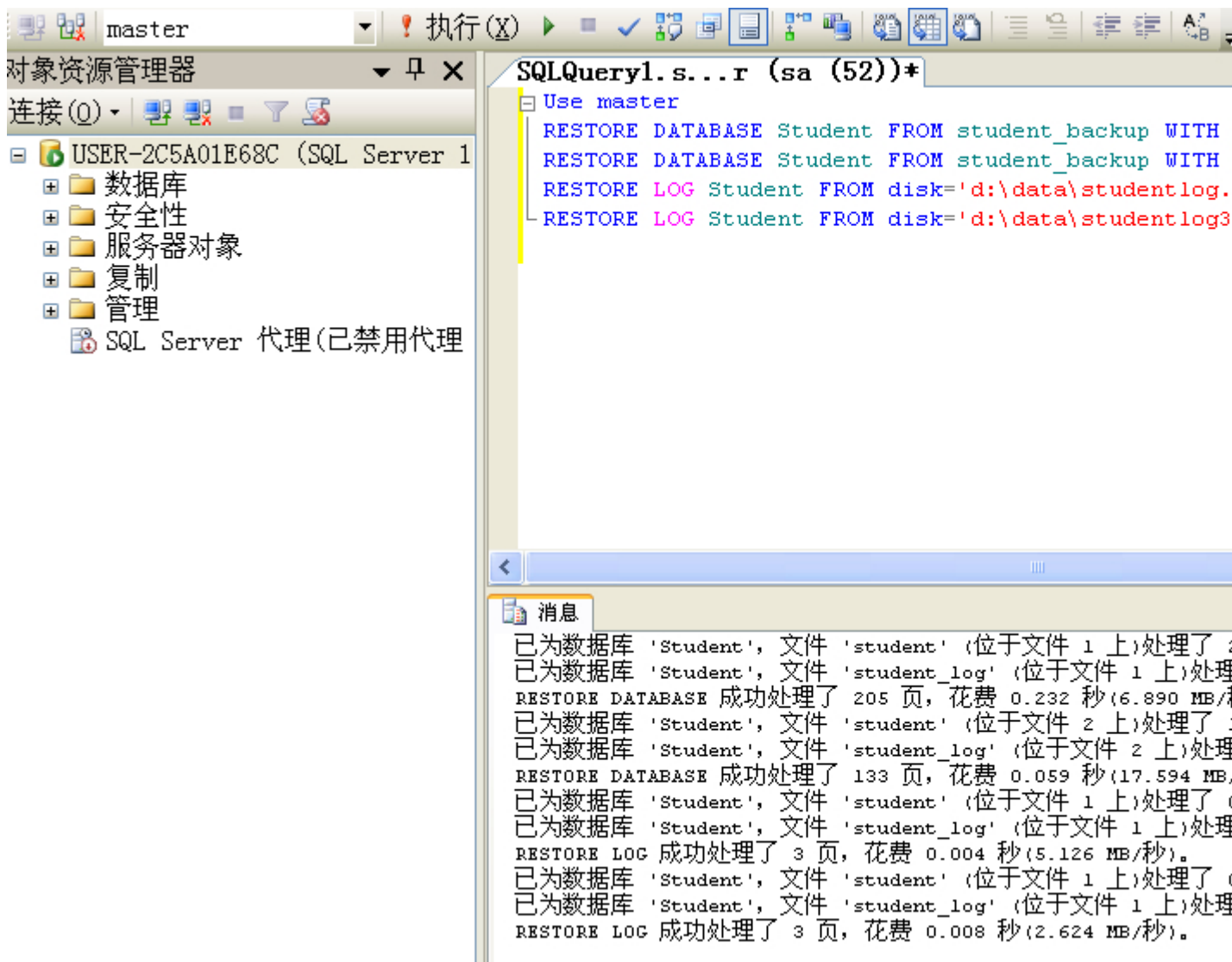
Use master

RESTORE DATABASE Student FROM student_backup WITH FILE=1, **REPLACE**, NORECOVERY

RESTORE DATABASE Student FROM student_backup WITH FILE=2, NORECOVERY

RESTORE LOG Student FROM disk='d:\data\studentlog.dat' WITH NORECOVERY

RESTORE LOG Student FROM disk='d:\data\studentlog3.dat'



五、 删除备份设备

`sp_dropdevice 'Student_backup'`