WHITE—DIVISION OF WATER RESOURCES
CANARY—CLIENT'S COPY
PINK—WELL DRILLER'S COPY

STATE OF NEVADA
DIVISION OF WATER RESOURCES

WELL DRILLER'S REPORT

Please complete this form in its entirety

OFFICE USE ONLY
Log No. 32554
Permit No.
Basin 10-179

PRINT OR TYPE ONLY

NOTICE OF INTENT NO. 12561

1. OWNER Kennecott Nevada Mines Div
MAILING ADDRESS McGill NV
ADDRESS AT WELL LOCATION RC Ruth Mines

2. LOCATION SE ¼ NW ¼ Sec. 14 T. 16 N/S R. 62 E. White Pine County
PERMIT NO. 46892 M10-167 (Issued by Water Resources) Parcel No. Subdivision Name RC

3. TYPE OF WORK
New Well ☒ Recondition ☐
Deepen ☐ Other ☐

4. PROPOSED USE
Domestic ☐ Irrigation ☐ Test ☒ monitor well
Municipal ☐ Industrial ☐ Stock ☐

5. TYPE WELL
Cable ☐ Rotary ☒
Other ☐

6. LITHOLOGIC LOG

Material	Water Strata	From	To	Thickness

All attached Lithologic Log

RECEIVED '89 NOV 13 A11:38 STATE ENGINEERS OFFICE

Date started 7/20, 1989
Date completed 7/26, 19..

7. WELL TEST DATA

Pump RPM	G.P.M.	Draw Down	After Hours Pump

BAILER TEST
G.P.M. ..... Draw down ..... feet ..... hours
G.P.M. ..... Draw down ..... feet ..... hours
G.P.M. ..... Draw down ..... feet ..... hours

8. WELL CONSTRUCTION
Diameter 10 inches Total depth 473 feet
..... inches
..... inches
Casing record 5
Weight per foot ..... Thickness .....

Diameter	From	To
..... inches	..... feet	..... feet
..... inches	..... feet	..... feet
..... inches	..... feet	..... feet
..... inches	..... feet	..... feet
..... inches	..... feet	..... feet
..... inches	..... feet	..... feet

Surface seal: Yes ☒ No ☐ Type 10 sack grout
Depth of seal 348 feet
Gravel packed: Yes ☒ No ☐
Gravel packed from ..... feet to ..... feet

Perforations:
Type perforation .....
Size perforation .....
From ..... feet to ..... feet
From ..... feet to ..... feet
From ..... feet to ..... feet
From ..... feet to ..... feet
From ..... feet to ..... feet

9. WATER LEVEL
Static water level ..... feet below land surface
Flow ..... G.P.M. ..... P.S.I.
Water temperature ..... °F Quality .....

10. DRILLER'S CERTIFICATION
This well was drilled under my supervision and the report is true to the best of my knowledge.
Name R.D. Reynolds (Contractor)
Address PO Box 402 (Contractor)
Nevada contractor's license number issued by the State Contractor's Board 014410
Nevada contractor's driller's number issued by the Division of Water Resources 1390
Nevada ~~driller's license~~ number issued by the Division of Water Resources, the on-site driller 1390
Signed R.D. Reynolds (By driller performing actual drilling on site or contractor)
Date 10/12/89

USE ADDITIONAL SHEETS IF NECESSARY

(Rev. 11-85) (O)-627

PRELIMINARY
10-179
DRAFT

[illegible] MINE

GEOLOGIC LOG: WELL R-C
Depths (in feet)

from	to	
0	8	Fill, mine dump material composed predominantly of limestone with some pyrite, light brown to tan.
8	20	Gravel, sand and silt derived predominantly from limestone, tan to light brown.
20	25	Limestone, very fine-grained, hard, dark gray.
25	30	Grades light brownish-gray with some oxidation of iron minerals.
30	70	Limestone, zones with varying degrees of clay alteration, soft, light gray.
70	95	Limestone, shaley, soft, altered, abundant pyrite, dark gray to black.
95	105	Grades with less pyrite.
105	110	Calcareous siltstone, very fine-grained, minor pyrite, medium to dark gray.
110	125	Limestone, fine-grained, medium gray, interbedded with thin calcareous siltstone beds, variable pyrite, medium gray.
125	140	Calcareous siltstone, very fine-grained, some pyrite, medium gray.
140	152	Limestone, very fine-grained, trace of pyrite, medium gray.
152	154	Grades with more pyrite, fractured.
154	156	Limestone, very fine-grained, occasional pyrite, medium gray.
156	205	Calcareous siltstone, very fine-grained, light greenish gray.
205	220	Limestone, very fine-grained, medium gray, interbedded with calcareous siltstone, light orange brown.
220	255	Grades predominantly to calcareous siltstone, fractured.
255	265	Evaporites, predominantly gypsum interbedded with limestone, very fine-grained, medium to dark gray.
265	268	Limestone, shaley, abundant with pyrite, medium to dark gray with thin interbeds of gypsum, white to light gray.
265	275	Evaporites, predominantly gypsum, white to light gray [illegible]
[illegible]	[illegible]	Limestone, very fine-grained, very shaley, pyrite, light to medium gray.
282	300	Grades with less pyrite.
[illegible]	[illegible]	Calcareous siltstone, very fine-grained, some pyrite, light to medium greenish-gray.
355	375	Evaporites, predominantly gypsum, interbedded with calcareous siltstone, light to medium gray.
375	405	Calcareous siltstone, very fine-grained, some pyrite, light to medium greenish-gray.
405	640	Calcareous siltstone, tan to light brown, interbedded with thin interbeds of gypsum and dark gray limestone.
640	648	Evaporites, predominantly gypsum, white to light gray interbedded with calcareous siltstone, tan to light greenish-gray.
648	650	Quartz vein, hard, clear to white.
650	665	Calcareous siltstone, tan to light gray, interbedded with thin beds of gypsum.
665	[illegible]	Quartz vein, hard, clear to white.

467 498 Limestone, hard, very fine-grained, light to medium grained, interbedded with siltstone, fine-grained, hard, white to light gray.

REMARKS: Boring was drilled to 497 feet below grade but caved back to 473 feet prior to well construction. Ground water was first encountered at approximately 100 feet below grade in a probable perched zone. Water was again encountered in fractures between 425 and 430 feet below grade.

WELL CONSTRUCTION DATA:

WELL R-C

Location: Township & Range Coordinates: SE1/4, NW1/4, NE1/4 of Sec.14, T.16N , R.62E .
Kennecott Coordinates: N. . E. .
Elevation: Ground; . feet. Top of casing; . feet.
Completion Date: 9/15/89
Drilling Co: R.D. Reynolds Drilling
Drilling Method: Air Rotary
Drilling Fluid: Water,foam
Boring: Diameter: 10 inch Depth: 497 feet.
Casing: Diameter: 5.0 inch Material: Schedule 80 PVC
Depth: from ground to 372.0 feet.
Screen: Diameter: 5.0 inch Material: Schedule 80 PVC, 0.064 slot
Screen Depth: 372.0 to 472.0 feet below grade.
Sand Pack: Type: #4-8 graded Colorado Silica Sand
Depth: from 353.0 feet. to total depth.
Bentonite Seal: Type: Bentonite pellets
Depth: 348.0 feet. to 353.0 feet.
Grout Seal: Type: Neat sand cement with 4% bentonite
Depth: from 0 to 348.0 feet.

WATER LEVEL DATA:

Static water level: Date: 7/20/89
Depth: 276.70 feet below top of casing
Elevation: . feet.
Chemistry: Date: 7/19/89
pH 7.47, Sp. cond. 2000 micromhos/cm.

REMARKS: Additional verified water quality information available.

Waiver M/O-167

STATE ENGINEER

89 NOV 13 AM 8:36