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

STATE OF NEVADA
DIVISION OF WATER RESOURCES

OFFICE USE ONLY
Log No. 35932
Permit No.
Basin 9-107

BMW-4 WELL DRILLER'S REPORT

PRINT OR TYPE ONLY

Please complete this form in its entirety

NOTICE OF INTENT NO. 15863

1. OWNER Sonora Mining Corp.
MAILING ADDRESS P.O. Box 546
Yerington - Nev 89447
ADDRESS AT WELL LOCATION Buckskin Mine
Yerington - Nev.

2. LOCATION SW ¼ NE ¼ Sec. 18 T. 13 N/S R. 24 E. Douglas County
PERMIT 60 m/c - 377 (Issued by Water Resources) | Parcel No. | Subdivision Name

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

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

5. TYPE WELL
Cable ☐ Rotary ☐
Other ☒ percussion hammer

6. LITHOLOGIC LOG

Material	Water Strata	From	To	Thickness
SEE				
Attached				
PAGES				

Date started 3/25, 1991
Date completed 3/26, 1991

7. WELL TEST DATA

Pump RPM	G.P.M.	Draw Down	After Hours Pump
NONE			

BAILER TEST
G.P.M. NONE 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 157 feet
inches
inches
Casing record PVC
Weight per foot Sch. 40 Thickness
Diameter 4" inches From feet To 155 feet
Surface seal: Yes ☒ No ☐, Type Neat cement
Depth of seal 50' feet
Gravel packed: Yes ☒ No ☐
Gravel packed from 141 feet to 157 feet

Perforations:
Type perforation slots
Size perforation .020
From 145 feet to 155 feet
From feet to feet
From feet to feet
From feet to feet
From feet to feet

9. WATER LEVEL
Static water level 145.45 feet below land surface
Flow NO 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 Layne Environmental (Contractor)
Address 16018 Valley Blvd Fontana, CA (Contractor)
Nevada contractor's license number issued by the State Contractor's Board
Nevada contractor's driller's number issued by the Division of Water Resources
Nevada driller's license number issued by the Division of Water Resources, the on-site driller 1468
Signed Stephen Johnson (By driller performing actual drilling on site or contractor)
Date 4/4/91

(Rev. 11-85) USE ADDITIONAL SHEETS IF NECESSARY (O)-627

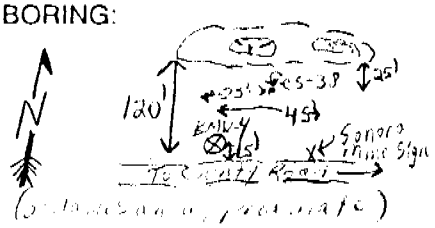
EXPLORATORY BORING LOG

GERAGHTY & MILLER, INC.
Environmental Services

PROJECT NO. NV67203 DATE 03/25/91
CLIENT
LOCATION Sonora mining - Yerington, NV
LOGGED BY D. Bradley DRILLER Steve Johnson

BORING BMW-4
SHEET 1 OF 4

FIELD LOCATION OF BORING:



GROUND ELEV. _____ DATUM _____

DRILLING METHOD Percussion Hammer
HOLE DIA. 10-inch
CASING DIA. 4-inch

WELL COMPLETION DATA

WATER LEVEL (below ground surface)	145.45'	145.40'		
TIME	3:20 pm	8:50 a.m.		
DATE	03/25/91	03/26/91		

WELL CONSTRUCTION (2 ft stick-up)	Drag	SAMPLE NUMBER	BLOWS/FT. OR PRESSURE PSI	DEPTH (ft)	SAMPLE	SOIL GROUP SYMBOL (U.S.C.S.)	SAMPLE/CORE DESCRIPTION
cement grout; 4 inch PVC Blank; cement grout	0			5		SM	Silty Sand. Dry. Mod. Yellowish brown Course Sand (30%), med Sand (60%), soft fine Sand (5%), Silt (5%), mod. sorted (all gravels are volcanic fragments) Silty [illegible]
	0			10		SW	Gravelly Sand. Dry. Mod. Yellowish brown poorly sorted (well graded sands), Sand-course (10%) Sand medium (70%) Sand fine (10%) gravel (10%) - very fine pebble size 1½ cm size pebbles. A few 4cm size pebbles
	0			15		SW	Gravelly Sand. Dry. grayish orange. Course Sand (35%), med. Sand (25%) poorly-sorted fine Sand (10%), gravel (30%) - very fine pebbles (2cm) a few 5cm pebbles
	0			20		GW	Well Graded (poorly sorted) gravels. little fines. Dry grayish-orange. Gravels (60%) course Sand (20%) med Sand (10%), fine Sand (10%) trace fine pebbles (2cm) [illegible] pebbles up to 5cm poorly sorted. Angular
	0			25		SW	Moderately Sorted Sands. Course (60%), med (20%) fine Sand (15%), gravel (5%). Pebble size gravels (7cm) Dry. Angular. Mod Yellowish brown. Sub Angular Sands
	0			30		SW	Gravelly Sand. Course Sand (40%), med (30%) fine (10%), gravel - very fine pebbles (20%) - 2cm in size trace of larger pebbles (6cm) Dry Poorly Sorted, Angular dark yellowish orange.
	0			35		SM	Silty Sand (Med. Sand - 85%), fine (5%) gravel (5%), Silt (5%), Dry, poorly graded dark yellowish Orange. 4cm size pebbles. Silty [illegible]
	0			40		SM	Silty Sand. Med. Sand (75%), course Sand (10%) fine Sand (5%), gravel (5%), Silt (5%) dry, dark yellowish orange. 3cm size pebbles
	0			45		SW	Gravelly Sand, very Course Sand (50%), med (20%) fine Sand (10%), gravel (20%) - trace of 7cm gravels dark yellowish Orange. Dry, Angular, poorly sorted Most gravels are very small pebbles (1-2cm in size)

MKE 9/89

EXPLORATORY BORING LOG

GERAGHTY & MILLER, INC.
Environmental Services

PROJECT NO. NV67203 DATE 03/25/91
CLIENT Sogore Mining Corp.
LOCATION Yerington, NV
LOGGED BY D. Brown DRILLER Steve Johnson

BORING BMW-4
SHEET 2 OF 4

FIELD LOCATION OF BORING: {see page 1}

GROUND ELEV. _____ DATUM _____

DRILLING METHOD Percussion Hammer
HOLE DIA. 10 inch
CASING DIA. 4 inch

WELL COMPLETION DATA

WELL CONSTRUCTION	SAMPLE NUMBER	BLOWS/FT. OR PRESSURE PSI	DEPTH (ft)	SAMPLE	SOIL GROUP SYMBOL (U.S.C.S.)	SAMPLE/CORE DESCRIPTION
	Ø		50		SW	Gravelly Sand. very coarse Sand (≈3mm) - (60%) med Sand (20%), gravel (15%), fine Sand (5%) Dry. Moderate Yellowish brown. gravels are Angular poorly sorted. Sands are Sub-Angular
	Ø		55		SW	Gravelly Sand; med-fine Sand (60%), coarse Sand (20%) gravel (20%), Dry, grayish orange. gravels are mainly 3cm in size. trace of 6-7cm gravels. Angular gravels, Subangular Sands. Poorly sorted
	Ø		60		SW	Gravelly Sand. Course Sand (50%), med (20%) fine Sand (10%), gravel (20%). Dry. Med Yellowish brown. gravels are ≈2cm in size. Poorly sorted gravels & sands are Sub-angular
	Ø		65		SW	Same as above
	Ø		70		SW	Gravelly Sand. Clean Sand consisting mainly of Course coarse med. Sand. Dry Subangular. Dark Yellowish orange. Med-coarse Sand (65%), fine Sand (25%) gravel (10%) → 1-2cm.
	Ø		75		GW →	Sandy Gravel. Dry. dark yellowish orange. very fine pebble size (4mm to 2cm) → (60%) med-course Sand (35%), fine Sand (5%)
	Ø		80		SW →	Gravelly Sand. Course Sand (40%), med Sand (45%) fine Sand (5%), gravel (10%) Dry, dark-Yellowish orange. 2-3cm gravels. trace of 5-6cm gravels. Subangular sands. Angular gravel. Poorly sorted
	Ø		85		SW →	very coarse Sand (60%), med (10%), fine (5%) gravels (1mm size) → (20%), gravels (>2mm) 5%. Dry. Sands and gravels are subangular. Moderately sorted. Med Yellowish brown.
	Ø		90		SM	Silty Sand. fine Sand (30%), Silt (5%) Course (20%), med (40%), gravel (5%) Dry Mod Yellowish brown. very small pebble size gravel

MKE 9/89

EXPLORATORY BORING LOG

GERAGHTY & MILLER, INC.
Environmental Services

PROJECT NO. NV67203 DATE 03/25/91
CLIENT Sonora Mining Corp.
LOCATION Yerington, NV
LOGGED BY [illegible] DRILLER [illegible]

BORING BMW-4
SHEET 3 OF 4

FIELD LOCATION OF BORING:

See Page 1

GROUND ELEV. _____ DATUM _____

DRILLING METHOD Percussion Hammer
HOLE DIA. 10 inch
CASING DIA: 4 inch

WELL COMPLETION DATA _____

WATER LEVEL				
TIME				
DATE				

WELL CONSTRUCTION	Drager readings	SAMPLE NUMBER	BLOWS/FT. OR PRESSURE PSI	DEPTH (ft)	SAMPLE	SOIL GROUP SYMBOL (U.S.C.S.)	SAMPLE/CORE DESCRIPTION
Slurry 4 inch Slurry	Ø			95		SM	Silty Sand: Fine Sand (40%), Silt (10%) med-Sand (40%), Dry, Course Sand (10%), Pale yellowish brown Silty clayey matrix
	Ø			100		SW	Med. Sand (60%), coarse (25%) fine (10%) gravel - very fine pebble size - (5%). Dry, Mod. yellowish brown, Poorly Sorted Angular gravels. Subrounded Sands Silt matrix
	Ø			105		SM	Silty Sand: Med. Sand (50%), fine Sand (10%), coarse, very coarse Sand (30%), gravel (5%), Silt (5%), Dry, Mod. yellowish brown Silty clayey matrix
	Ø			110		SW	Med. Sand (60%), coarse to med (35%) gravel (5%) Dry, Mod. yellowish brown Silty matrix
	Ø			115		SW	Med Sand (80%), course (5%) fine Sand (10%), gravel (5%) very fine pebble size. trace of 6-7cm size. Dry, Pale yellowish brown, sub-rounded sand. poorly sorted, Silt matrix
	Ø			120		SW	Same as above
	Ø			125		SW	Med Sand (60%), coarse (25%) fine (10%) gravel (5%) sub Angular gravels (3 cm in size) Dry, mod. yellowish brown, subrounded sand trace of larger gravels (≈6-7cm), Silt matrix
	Ø			130		SW	Med. Sand (70%) Coarse (20%), fine (5%) gravel (5%), Dry, mod. yellowish brown
137.5	Ø			135		SW	Coarse & Med Sand (80%), fine Sand (15%) gravel (<5%) very fine pebble size, dry Mod. yellowish brown

MKE 9/87

EXPLORATORY BORING LOG

GERAGHTY & MILLER, INC.
Environmental Services

PROJECT NO. NV67203 DATE 03/25/91
CLIENT Sonora Mining
LOCATION Yerington, NV
LOGGED BY D. Bradley DRILLER S. Johnson

BORING BMW-4
SHEET 4 OF 4

FIELD LOCATION OF BORING:

See page 1

GROUND ELEV. _____ DATUM _____

DRILLING METHOD Percussion Hammer
HOLE DIA. 10 inch
CASING DIA. 4 inch

WELL COMPLETION DATA _____

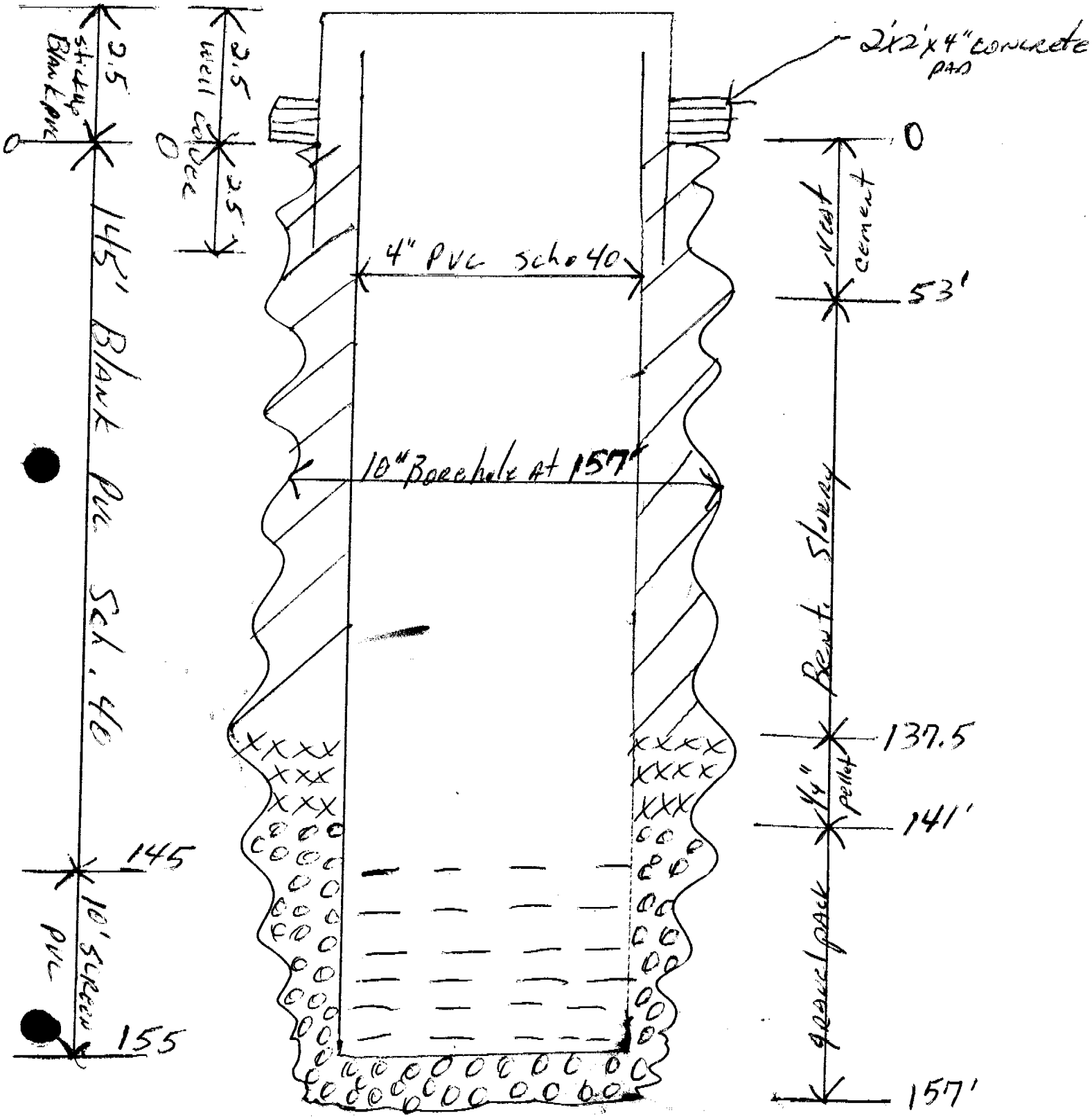
WATER LEVEL				
TIME				
DATE				

WELL CONSTRUCTION		SAMPLE NUMBER	BLOWS/FT. OR PRESSURE PSI	DEPTH (feet)	SAMPLE	SOIL GROUP SYMBOL (U.S.C.S.)	SAMPLE/CORE DESCRIPTION
Sand	140			140		SW	Med Sand (60%) Coarse (20%) fine (10%) gravel (10%). Dry, mod. Yellowish brown sub-rounded sands, subangular gravel, poorly-sorted, gravels are ± 3cm in size. Silty matrix. Poorly-sorted.
	145'			145		SW	Med Sand (50%) Coarse (30%) fine (10%) gravel (10%) → very fine pebble size 1/2cm Moist, Mod. Yellowish brown. Subangular
				150		SW	Coarse & med Sand (60%), gravel (30%), fine Sand (10%), Saturated Mod. Yellowish brown gravels average 1cm in size. Trace of 6-7cm gravel fragments. Poorly-sorted. Silty clay matrix
	155'			155		GW	Gravel (90%) pebbles range from 1 to 5cm, Saturated, Med [illegible] Sand (10%) Dark [illegible] brown
	157.0 Bottom of borehole						

Bottom of boring = 157 feet
03/25/91
Entire boring drilled on 03/25/91
Well construction also 03/25/91

MKE 9/89

BMW-4



2'x2'x4" concrete pad
2.5
stickup Blank PVC
0
2.5
well cover
0
2.5
145' Blank PVC Sch. 40
4" PVC Sch. 40
10" Borehole at 157'
0
Neat cement
53'
Bent. Slurry
137.5
1/4" pellet
141'
gravel pack
157'
145
10' Screen PVC
155