STATE OF NEVADA
DIVISION OF WATER RESOURCES
WELL DRILLER'S REPORT

OFFICE USE ONLY
Log No. 122065
Permit No.
Basin No. 054

PRINT OR TYPE IN BLACK INK ONLY
DO NOT WRITE ON BACK

Please complete this form in its entirety in accordance with NRS 534.170 and NAC 534.340

NOTICE OF INTENT NO. 71746
WELL NAME (if applicable): IM-71

1. OWNER/CLIENT NAME: Barrick Cortez
MAILING ADDRESS: HC-66 P.O. Box 1250
Crescent Valley, NV 89821

DETAILED ADDRESS AT WELL LOCATION: Cottonwood Filtration Project
Crescent Valley, NV
Subdivision Name: None County: Eureka

2. PLS LOCATION: SE ¼ SE ¼ 35 Sec 29N N/S 49 E
PERMIT/WAIVER NO.: M/O - 1975 (Issued by Water Resources) (Current Parcel No.)

Latitude: UTM E: 550,345 ☑ NAD 27
Longitude: UTM N: 4,464,704 ☐ NAD 83/WGS 84

3. WORKED PERFORMED
☑ New Well ☐ Deepen: Orig WL#
☐ Replacement: Original well log #
☐ Recondition: Original well log #

4. PROPOSED USE
☐ Domestic ☐ Irrigation ☑ Monitor
☐ Mining / Dewater ☐ Com / Ind ☐ Stock
☐ Test / Other ☐ Mun / QM ☐ Rec

5. WELL TYPE
☐ Auger ☐ Rotary ☐ RVC
☐ Air ☐ Mud ☑ Sonic
☐ Other

6. LITHOLOGIC LOG

Material Encountered	Lost Circ.	Water Strata	From	To
See Attached Copy				

Nad 27
40.333253 N
116.416 7328 W

Date started: 23-Feb, 20 15
Date completed: 1-Mar, 20 15

7. WATER QUALITIES
Static water level: 417 Feet below land surface
Artesian Flow: G.P.M. P.S.I.
Water Temperature: N/A ° Fahrenheit
Water Quality:

8. WELL TEST DATA
Test Method: ☐ Bailer ☐ Pump ☐ Air Lift

G.P.M.	Draw Down (Feet Below Static)	Recorded Time (Hours)

9. WELL CONSTRUCTION
Depth Drilled: 0 Feet 447 Depth Cased: 447 Feet

HOLE DIAMETER (BIT SIZE)

		From		To	
8"	Inches	0	Feet	447	Feet
	Inches		Feet		Feet
	Inches		Feet		Feet

CASING SCHEDULE

Size O.D. (Inches)	Weight/Ft. (Pounds)	Wall Thickness (Inches)	From (Feet)	To (Feet)
4"		SCH 80	0	417

ANNULAR MATERIALS
Sanitary Seal ☑ Yes ☐ No

☐ Neat Cement		to		☐ Pumped	☐ Poured
☐ Cement Grout		to		☐ Pumped	☐ Poured
☑ Concrete Grout	0	to	3	☐ Pumped	☑ Poured
☑ Bentonite Chips	3	to	415	☐ Pumped	☑ Poured
☑ Gravel Pack [> 0.2 in.]	415	to	447	☐ Pumped	☑ Poured
☐ Sand Pack [< 0.2 in.]		to		☐ Pumped	☐ Poured
☐ Other, explain:		to		☐ Pumped	☐ Poured

PERFORATIONS:
Type of perforation: Factory Cut
Size of perforation: 0.02
From 417 Feet To 447 Feet
From Feet To Feet
From Feet To Feet
From Feet To Feet
From Feet To Feet

10. DRILLER'S CERTIFICATION
This well was drilled under my supervision. This report is true to the best of my knowledge.
Name: Boart Longyear Company (Contractor)
Address: 7103 W. Augusta Avenue, Glendale, AZ 85303 (Contractor)
Nevada contractor's license number as issued by the State Contractor's Board: 0021936
Nevada well driller's license number as issued by the Nevada Division of Water Resources (on-site driller):
Signed: (By driller performing actual drilling on site or contractor)
Date: 3-31-15

RECEIVED 2015 APR -7 AM 10:21 STATE ENGINEER'S OFFICE

(Rev. 12-13) USE ADDITIONAL SHEETS IF NECESSARY

Barrick Cortez	Geology/Drill Log	Hole ID: IM-71s RECEIVED

Project:	Cottonwood I-70 RIB MW	Inclination:	-90
Drilling Company:	BLY	Azimuth:	0
Drilling Method:	Sonic	Easting:	550345
Date Started:	2/23/15	Northing:	4464704
Date Finished:	3/1/15	Elevation: 5200	Total Depth: 447

2015 APR -7 AM 10: 21
STATE ENGINEERS OFFICE

Page 1

Depth From (ft)	Depth To (ft)	Run Lengt	Recovery (ft)	Recovery (%)	Grain Size % Gravel	Grain Size % Sand	Grain Size % Fines	Graghic Log	Moisture (1-5)	Lithologic Discription
0	21								1	Tan Brown silty sandy gravel
21	25								1	Brown sandy gravel
25	28								1	Tan silty sandy gravel w/clay
28	30								1	Brown sandy gravel
30	37								1	Tan silty sandy gravel
37	60								1/2	Tan Brown silty sandy gravl w/clay
60	84								1	Tan brown sandy gravel
84	87								3	Brown silty clay w/gravel
87	94								1	Brown silty sandy gravel
94	97								3	" " w/clay
97	104								1	" "
104	113								1	" " w/cobbles
113	137								1	" "
137	145								1	" " w/cobbles
145	159								1	" "
159	177								1	Brown sandy gravel w/cobbles
177	194								1	Brown silty sandy gravel
194	205								1	Brown sandy gravel

Clay	Can be rolled in a rope 1/4-in diameter	Dry	Moisture Absent
Silt	Can not be rolled into rope	Moist	Damp, With No Visible Water
Sand with Clay/Silt	20% or more of formation is clay/silt	Wet	Visible Water
Sand, fine - med	Fine to medium (<0.5mm-2 mm),		
Sand med-coarse	Medium to coarse (2-5 mm)		
Sand with Gravel	20% or more of formation is sand		
Gravel	>80% Gravel - Fine (5-20 mm), Coarse (20-75 mm)		

Barrick Cortez	Geology/Drill Log	Hole ID: IM-71s RECEIVED

Project:	Cottonwood II-IV RIB MW	Inclination:	-90
Drilling Company:	BLY	Azimuth:	0
Drilling Method:	Sonic	Easting:	550345
Date Started:	2/23/15	Northing:	4464704
Date Finished:	3/1/15	Elevation:	5200
		Total Depth:	447

Page 1

2015 APR -7 AM 10: 21
STATE ENGINEERS OFFICE

Depth From (ft)	Depth To (ft)	Run Lengt	Recovery (ft)	Recovery (%)	Grain Size % Gravel	Grain Size % Sand	Grain Size % Fines	Graghic Log	Moisture (1-5)	Lithologic Discription
0	21								1	Tan Brown silty sandy gravel
21	25								1	Brown sandy gravel
25	28								1	Tan silty sandy gravel w/clay
28	30								1	Brown sandy gravel
30	37								1	Tan silty sandy gravel
37	60								1/2	Tan Brown silty sandy gravl w/clay
60	84								1	Tan brown sandy gravel
84	87								3	Brown silty clay w/gravel
87	94								1	Brown silty sandy gravel
94	97								3	" " w/clay
97	104								1	" "
104	113								1	" " w/cobbles
113	137								1	" "
137	145								1	" " w/cobbles
145	159								1	" "
159	177								1	Brown sandy gravel w/cobbles
177	194								1	Brown silty sandy gravel
194	205								1	Brown sandy gravel

Clay	Can be rolled in a rope 1/4-in diameter	Dry	Moisture Absent
Silt	Can not be rolled into rope	Moist	Damp, With No Visible Water
Sand with Clay/Silt	20% or more of formation is clay/silt	Wet	Visible Water
Sand, fine - med	Fine to medium (<0.5mm-2 mm),		
Sand med-coarse	Medium to coarse (2-5 mm)		
Sand with Gravel	20% or more of formation is sand		
Gravel	>80% Gravel - Fine (5-20 mm), Coarse (20-75 mm)		

Barrick Cortez	**Geology/Drill Log**	Hole ID: TM-71s

RECEIVED
2015 APR -7 AM 10: 21
STATE ENGINEERS OFFICE

Page 2

Project:		Inclination:	
Drilling Company:		Azimuth:	
Drilling Method:		Easting:	
Date Started:		Northing:	
Date Finished:		Elevation:	Total Depth:

Depth		Run	Recovery		Grain Size			Graghic	Moisture	Lithologic Discription
From (ft)	To (ft)	Lengt	(ft)	(%)	% Gravel	% Sand	% Fines	Log	(1-5)	
200	205	5								
205	~~210~~	5	205	217					1	Brown silty sandy gravel
~~210~~	~~215~~	5	217	247					1	Brown Sandy Gravel
215	220	5							1	
220	225	5							1	
225	230	5							1	
230	235	5							1	
235	240	5							1	
240	~~245~~	5	247	252					1	Brown silty sandy gravel w/ clay & cobbles
~~245~~	~~250~~	5							1	
250	255	5	252	254					1	Brown Sandy Gravel
255	260	5	254	260					3	Brown silty gravel w/clay
260	265	5	260	407					2	Brown silty sandy gravel
265	270	5							2	
270	275	5							3	
275	280	5							2	
280	285	5							2	
285	290	5							2	
290	295	5							2	
295	300	5							2	

Clay	Can be rolled in a rope 1/4-in diameter	Dry	Moisture Absent
Silt	Can not be rolled into rope	Moist	Damp, With No Visible Water
Sand with Clay/Silt	20% or more of formation is clay/silt	Wet	Visible Water
Sand, fine - med	Fine to medium (<0.5mm-2 mm),		
Sand med-coarse	Medium to coarse (2-5 mm)		
Sand with Gravel	20% or more of formation is sand		
Gravel	>80% Gravel - Fine (5-20 mm), Coarse (20-75 mm)		

Barrick Cortez	Geology/Drill Log	Hole ID: IM-71s Pgs 3

RECEIVED
2015 APR -7 AM 10:21
STATE ENGINEERS OFFICE

Page 3

Project:		Inclination:	
Drilling Company:		Azimuth:	
Drilling Method:		Easting:	
Date Started:		Northing:	
Date Finished:		Elevation:	Total Depth:

Depth		Run	Recovery		Grain Size			Graghic	Moisture	Lithologic Discription
From (ft)	To (ft)	Lengt	(ft)	(%)	% Gravel	% Sand	% Fines	Log	(1-5)	
300	305	5							2	Brown Silty Sandy Gravel
305	310	5							2	
310	315	5							2	
315	320	5							2	
320	325	5							2	
325	330	5							2	
330	335	5							2	
335	340	5							2	
340	345	5							2	
345	350	5							2	
350	355	5							2	
355	360	5							2	
360	365	5							2	
365	370	5							3	
370	375	5							2	
375	380	5							3	
380	385	5							2	
385	390	5							2	
390	395	5							3	
395	400	5							3	

Clay	Can be rolled in a rope 1/4 in diameter	Dry	Moisture Absent
Silt	Can not be rolled into rope	Moist	Damp, With No Visible Water
Sand with Clay/Silt	20% or more of formation is clay/silt	Wet	Visible Water
Sand, fine - med	Fine to medium (<0.5mm-2 mm),		
Sand med-coarse	Medium to coarse (2-5 mm)		
Sand with Gravel	20% or more of formation is sand		
Gravel	>80% Gravel - Fine (5-20 mm), Coarse (20-75 mm)		

RECEIVED
2015 APR 7 AM 10:21
STATE ENGINEERS OFFICE

Barrick Cortez	Geology/Drill Log	Hole ID: IM-71s page 4

Page 4

Project:		Inclination:	
Drilling Company:		Azimuth:	
Drilling Method:		Easting:	
Date Started:		Northing:	
Date Finished:		Elevation:	Total Depth:

Depth From (ft)	Depth To (ft)	Run Lengt	Recovery (ft)	Recovery (%)	Grain Size % Gravel	Grain Size % Sand	Grain Size % Fines	Graghic Log	Moisture (1-5)	Lithologic Discription
~~400~~	~~405~~	5		407	417				3	Brown silty sandy gravel, mod Feox, w/cobbles
~~405~~	~~410~~	5							3	
~~410~~	~~415~~	5							4	
~~415~~	~~420~~	5		417	437				5	" " w/cobbles, strong Feox
420	425	5							5	1ST H_2O 417'
425	430	5							5	
430	435	5							5	
435	440	5		437	447				5	Brown sandy gravel, mod strong Feox
440	445	5							5	
445	450	5							5	
450	455	5								TD 447'
455	460	5								
460	465	5								
465	470	5								
470	475	5								
475	480	5								
480	485	5								
485	490	5								
490	495	5								
495	500	5								

Clay	Can be rolled in a rope 1/4-in diameter	Dry	Moisture Absent
Silt	Can not be rolled into rope	Moist	Damp, With No Visible Water
Sand with Clay/Silt	20% or more of formation is clay/silt	Wet	Visible Water
Sand, fine - med	Fine to medium (<0.5mm-2 mm),		
Sand med-coarse	Medium to coarse (2-5 mm)		
Sand with Gravel	20% or more of formation is sand		
Gravel	>80% Gravel - Fine (5-20 mm), Coarse (20-75 mm)		