

MONITOR WELL CONSTRUCTION SUMMARY

LAS VEGAS WASH MAY 2002

Well Number	Install Date	SWL (fbls)	Develop. Date
WMW 5.58 S	5/13/2002	6.2	5/17/2002
WMW 5.7 N	5/10/2002	4.1	5/17/2002
WMW 5.85 S	5/10/2002	2.8	5/17/2002
WMW 6.15 S	5/9/2002	8.1	not devel

ALL WELLS WERE DRILLED AND INSTALLED USING HOLLOW STEM AUGER BY EAGLE DRILLING SERVICES, LLC. NEITHER POLYMERS NOR ADDITIVES WERE USED DURING INSTALLATION. WELLS WERE DEVELOPED BY PUMPING 5 CASING VOLUMES FROM EACH WELL.

SOUTHERN NEVADA WATER AUTHORITY

WELL LOG

WIMW 5.58S (shallow)

PROJECT: Vegetation Monitoring
 HOLE LOCATION: 5.58 South
 BORE HOLE SIZE (diameter): 10 1/4 in.
 CASING SIZE/TYPE: 4-in. sched. 40 PVC
 COLLAR ELEVATION: _____
 INITIAL STATIC WATER LEVEL: 6.9 fbls
 24-hr STATIC WATER LEVEL: 6.17 fbls

COMPLETION DATE: 5/13/02
 EQUIPMENT: D-50 (track mounted)
 LOGGED BY: B. Quinn
 COORDINATES: _____
 DATE MEASURED: 5/13/02
 DATE MEASURED: 5/14/02

ELEVATION/ DEPTH	SOIL/ROCK SYMBOL	LITHOLOGIC DESCRIPTION	WELL CONSTRUCTION
		<p style="text-align: center;"><i>1/2" to 1" gravel to T.D.</i></p> <p style="text-align: center;"><i>wet @ 7 ft</i></p>	<p style="text-align: center;"><i>Not to Scale</i></p> <p style="text-align: center;"><i>Steel Well riser</i></p> <p style="text-align: center;"><i>Cement & grout</i></p> <p style="text-align: center;"><i>bentonite seal</i></p> <p style="text-align: center;"><i>#3 sand pack</i></p> <p style="text-align: center;"><i>0.02" machine slotted screen</i></p>
		<p><i>END OF BORING @ 20.0 ft</i></p> <p><i>Groundwater @ 6.2 ft</i></p>	

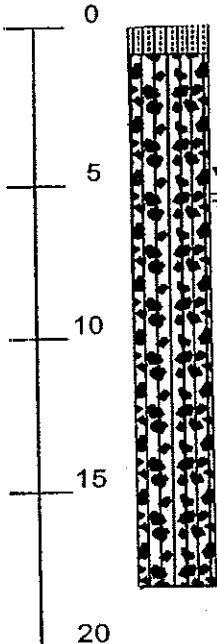

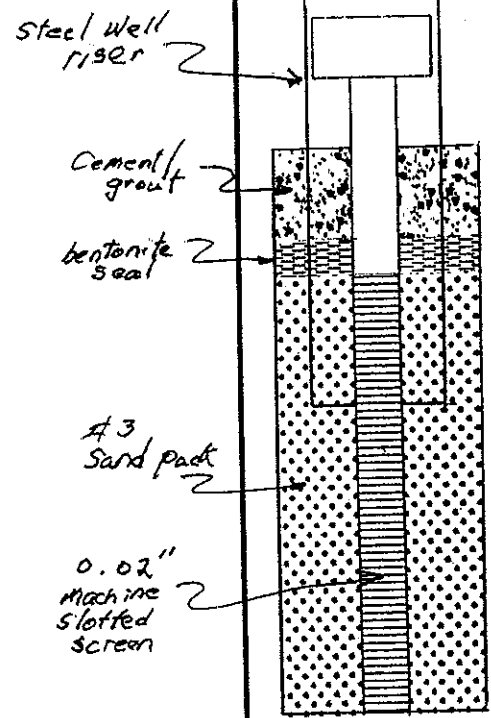
SOUTHERN NEVADA WATER AUTHORITY

WELL LOG

WMW-5. 7N

PROJECT: Vegetation Monitoring
 HOLE LOCATION: 5.7 N
 BORE HOLE SIZE (diameter): 10 1/4 in.
 CASING SIZE/TYPE: 4-in. sched. 40 PVC
 COLLAR ELEVATION: _____
 INITIAL STATIC WATER LEVEL: 3.75 ft. (bls)
 24-hr STATIC WATER LEVEL: 4.13 ft. (bls)

COMPLETION DATE: 5/10/02
 EQUIPMENT: D-50 (track mounted)
 LOGGED BY: B. Quinn
 COORDINATES: _____
 DATE MEASURED: 5/10/02
 DATE MEASURED: 5/13/02

ELEVATION/ DEPTH	SOIL/ROCK SYMBOL	LITHOLOGIC DESCRIPTION	WELL CONSTRUCTION
		<p>Poorly graded gravel with sand and minor clay</p> <p>Wet at 5.0 ft</p> <p>Sandy gravel</p> <p style="text-align: center;">End of boring @ 18.5 ft. Ground water encountered @ 5.0 ft.</p>	 <p style="text-align: center;">Steel well riser</p> <p style="text-align: center;">Cement/grout</p> <p style="text-align: center;">bentonite seal</p> <p style="text-align: center;">#3 Sand pack</p> <p style="text-align: center;">0.02" Machine slotted screen</p>

SOUTHERN NEVADA WATER AUTHORITY

WELL LOG WMW 5.85 S

PROJECT: Vegetation Monitoring
HOLE LOCATION: 5.85 South
BORE HOLE SIZE (diameter): 10 1/4 in.
CASING SIZE/TYPE: 4-in. sched. 40 PVC
COLLAR ELEVATION: _____
INITIAL STATIC WATER LEVEL: 3.10 fbls
24-hr STATIC WATER LEVEL: 2.79 fbls

COMPLETION DATE: 5/10/02
EQUIPMENT: D-50 (track mounted)
LOGGED BY: B. Quinn
COORDINATES: _____
DATE MEASURED: 5/10/02
DATE MEASURED: 5/13/02

ELEVATION/ DEPTH	SOIL/ROCK SYMBOL	LITHOLOGIC DESCRIPTION	WELL CONSTRUCTION
		<p style="text-align: center;">Sandy gravel</p> <p style="text-align: center;">MOIST WET</p> <hr style="border-top: 1px dashed black;"/> <p style="text-align: center;">increasing silt & clay</p> <hr style="border-top: 1px solid black;"/> <p style="text-align: center;">Clay, dark grey</p> <p style="text-align: center;">END OF BORING @ 14.0 FT Groundwater encountered @ 2.8 ft</p>	<p style="text-align: center;">Steel well riser</p> <p style="text-align: center;">Cement grout</p> <p style="text-align: center;">bentonite seal</p> <p style="text-align: center;">#3 sand packs</p> <p style="text-align: center;">0.02" machine slotted screen</p>

SOUTHERN NEVADA WATER AUTHORITY

WELL LOG WMW 6.15 S

PROJECT: Vegetation Monitoring
HOLE LOCATION: 6.15 S.
BORE HOLE SIZE (diameter): 10 1/4 in.
CASING SIZE/TYPE: 4-in. sched. 40 PVC
COLLAR ELEVATION: _____
INITIAL STATIC WATER LEVEL: 8.1 ft
24-hr STATIC WATER LEVEL: 8.1 ft.

COMPLETION DATE: 5/9/02
EQUIPMENT: D-50 (track mounted)
LOGGED BY: B. Quinn
COORDINATES: _____
DATE MEASURED: 5/9/02
DATE MEASURED: 5/10/02

ELEVATION/ DEPTH	SOIL/ROCK SYMBOL	LITHOLOGIC DESCRIPTION	WELL CONSTRUCTION
			NOT TO SCALE
		<p style="text-align: center;">TOP SOIL: fine-grained silty sand</p> <hr/> <p style="text-align: center;">MOIST</p> <hr/> <p style="text-align: center;">WET</p> <hr/> <p style="text-align: center;">SANDY GRAVEL</p> <hr/> <p style="text-align: center;">STIFF CLAY</p> <p style="text-align: center;">END OF BORING @ 20.0 ft. Ground water encountered @ _____ ft.</p>	<p style="text-align: center;">Steel Well riser</p> <p style="text-align: center;">Cement</p> <p style="text-align: center;">Bentonite seal</p> <p style="text-align: center;">#3 Sand</p> <p style="text-align: center;">0.020" slot screen (machined)</p> <p style="text-align: center;">TD @ 20.0 ft.</p>

STATE OF NEVADA
DIVISION OF WATER RESOURCES

OFFICE USE ONLY

Log No _____
Permit No _____
Basin _____

PRINT OR TYPE ONLY
DO NOT WRITE ON BACK

WELL DRILLER'S REPORT

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

NOTICE OF INTENT NO 22804

1. OWNER Bureau of Reclamation
MAILING ADDRESS P.O. Box 61470
Boulder city 89006
2. LOCATION SE 1/4 SE 1/4 Sec 30 T 21 N/S R 63 E CLARK County
PERMIT NO _____ Parcel No. 160-30-000-003 Subdivision Name _____

3. WORK PERFORMED
 New Well Replace Recondition
 Deepen Abandon Other _____
4. PROPOSED USE
 Domestic Irrigation Test
 Municipal/Industrial Monitor Stock
5. WELL TYPE
 Cable Rotary RVC
 Air Other HSA

6. WMW 5.58 S LITHOLOGIC LOG

Material	Water Strata	From	To	Thickness
GRAVEL		0	20	20

8. WELL CONSTRUCTION
Depth Drilled 0 Feet Depth Cased _____ Feet
HOLE DIAMETER (BIT SIZE)
From 0 To 20
Inches _____ Feet _____
Inches _____ Feet _____
Inches _____ Feet _____

CASING SCHEDULE

Size O.D (Inches)	Weight/Ft (Pounds)	Wall Thickness (Inches)	From (Feet)	To (Feet)
4	SCH 40		5	5'

Perforations:
Type perforation MACHINE SLOTTED
Size perforation .020
From 5 feet to 20 feet
From _____ feet to _____ feet
From _____ feet to _____ feet
From _____ feet to _____ feet
From _____ feet to _____ feet

Surface Seal: Yes No Seal Type:
Depth of Seal 3'5" Neat Cement
Placement Method: Pumped Cement Grout
 Poured Concrete Grout
Gravel Packed: Yes No
From _____ feet to _____ feet

9. WATER LEVEL
Static water level 6.5 feet below land surface
Artesian 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: EAGLE DRILLING SERVICES LLC
Address: 7150 PLACID RD LAS VEGAS NV
Contractor

Date started 5/13 2002
Date completed 5/13 2002

7. WELL TEST DATA

TEST METHOD:	G.P.M.	Draw Down (Feet Below Static)	Time (Hours)
<input type="checkbox"/> Bailer <input type="checkbox"/> Pump <input type="checkbox"/> Air Lift			

Nevada contractor's license number 51266 issued by the State Contractor's Board
Nevada driller's license number issued by the Division of Water Resources, the on-site driller
Signed: [Signature]
By driller performing actual drilling on site or contractor
Date: 05-15-02

STATE OF NEVADA
 DIVISION OF WATER RESOURCES

WELL DRILLER'S REPORT

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

OFFICE USE ONLY

Log No. _____
 Permit No. _____
 Basin _____

PRINT OR TYPE ONLY
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NOTICE OF INTENT NO. 22804

1 OWNER BUREAU of Reclamation ADDRESS AT WELL LOCATION _____
 MAILING ADDRESS PO BOX 61470 _____
Boulder City NV 89006 _____
 2 LOCATION SE 1/4 SE 1/4 Sec 30 T 21 N/S R 63 E CLARK County _____
 PERMIT NO _____ Parcel No. 160-50-000-003 Subdivision Name _____

3 WORK PERFORMED
 New Well Replace Recondition
 Deepen Abandon Other _____

4. PROPOSED USE
 Domestic Irrigation Test
 Municipal/Industrial Monitor Stock

5. WELL TYPE
 Cable Rotary RVC
 Air Other ABA

6. WMW 5.7 N LITHOLOGIC LOG

Material	Water Strata	From	To	Thick-ness
<u>SAND GRAVEL</u>		<u>0</u>	<u>19</u>	<u>19</u>
<u>CLAY</u>		<u>19</u>	<u>20</u>	<u>1</u>

8. WELL CONSTRUCTION
 Depth Drilled 0 Feet Depth Cased 20 Feet

HOLE DIAMETER (BIT SIZE)
10 1/4 Inches From 0 Feet To 20 Feet
 _____ Inches _____ Feet _____ Feet
 _____ Inches _____ Feet _____ Feet

CASING SCHEDULE

Size O.D. (Inches)	Weight/Ft (Pounds)	Wall Thickness (Inches)	From (Feet)	To (Feet)
<u>4</u>	<u>SUT 40</u>	<u>1 3/8</u>	<u>13</u>	<u>5</u>

Perforations: MACHINE slotted
 Type perforation _____
 Size perforation .020

From 5 feet to 20 feet
 From _____ feet to _____ feet
 From _____ feet to _____ feet
 From _____ feet to _____ feet
 From _____ feet to _____ feet

Surface Seal: Yes No Seal Type: _____
 Depth of Seal 1-3 Neat Cement
 Placement Method: Pumped Cement Grout
 Poured Concrete Grout

Gravel Packed: Yes No
 From 3 feet to 20 feet

9. WATER LEVEL
 Static water level 6.5 feet below land surface
 Artesian flow _____ GPM _____ PSI
 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 EAGLE Drilling SERVICES LLC
 Address 7150 PLACIO RD LAS VEGAS NV 89119
 Nevada contractor's license number 51266 issued by the State Contractor's Board
 Nevada driller's license number issued by the Division of Water Resources, the on-site driller _____
 Signed [Signature] By driller performing actual drilling on site or contractor
 Date 05.15.02

Date started 5/10 2002, 19____
 Date completed 5/10 2002, 19____

7. WELL TEST DATA

TEST METHOD: Bailer Pump Air Lift

GPM	Draw Down (Feet Below Static)	Time (Hours)

Log No. _____
Permit No. _____
Basin _____

PRINT OR TYPE ONLY
DO NOT WRITE ON BACK

WELL DRILLER'S REPORT

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

NOTICE OF INTENT NO. 22805

1. OWNER Bureau of Reclamation ADDRESS AT WELL LOCATION _____
MAILING ADDRESS PO BOX 61470
Boulder City NV 89006
2. LOCATION SW 1/4 SE 1/4 Sec 30 T. 21 N/S R. 63 E CLARK County _____
PERMIT NO. _____ Parcel No. 160-30-000-03 Subdivision Name _____

3. WORK PERFORMED
 New Well Replace Recondition
 Deepen Abandon Other _____
4. PROPOSED USE
 Domestic Irrigation Test
 Municipal/Industrial Monitor Stock
5. WELL TYPE
 Cable Rotary RYC
 Air Other ASA

6. WIMW 5.853 LITHOLOGIC LOG

Material	Water Strata	From	To	Thick-ness
<u>SAND Gravel</u>		<u>0</u>	<u>14</u>	<u>14</u>
<u>Clay</u>		<u>14</u>	<u>15</u>	

8. WELL CONSTRUCTION
Depth Drilled _____ Feet Depth Cased _____ Feet
HOLE DIAMETER (BIT SIZE)
From 10 1/4 Inches To 15 Feet
Inches _____ Feet _____ Feet
Inches _____ Feet _____ Feet

CASING SCHEDULE

Size O.D (Inches)	Weight/Ft (Pounds)	Wall Thickness (Inches)	From (Feet)	To (Feet)
<u>4</u>	<u>50</u>		<u>3</u>	<u>4</u>

Perforations:
Type perforation MACHINE SLOTTED
Size perforation 1020
From 3 feet to 14 feet
From _____ feet to _____ feet
From _____ feet to _____ feet
From _____ feet to _____ feet
From _____ feet to _____ feet

Surface Seal: Yes No Seal Type:
Depth of Seal 1-3 Neat Cement
Placement Method: Pumped Cement Grout
 Poured Concrete Grout
Gravel Packed: Yes No
From 3 feet to 14 feet

9. WATER LEVEL
Static water level 6.5 feet below land surface
Artesian flow _____ GPM _____ PSI
Water temperature _____ °F Quality _____

Date started 5/10 2002 19__
Date completed 5/10 2002 19__

7. WELL TEST DATA

TEST METHOD:	Bailer	Pump	Air Lift
G P M.	Draw Down (Feet Below Static)	Time (Hours)	

10. DRILLER'S CERTIFICATION
This well was drilled under my supervision and the report is true to the best of my knowledge.
Name ENGLE DRILLING LLC Contractor
Address 7150 Plover RD Contractor
LAS VEGAS NV 89119
Nevada contractor's license number issued by the State Contractor's Board 51266
Nevada driller's license number issued by the Division of Water Resources, the on-site driller _____
Signed [Signature] By driller performing actual drilling on site or contractor
Date 05-15-02

Log No. _____
 Permit No. _____
 Basin. _____

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 DO NOT WRITE ON BACK

WELL DRILLER'S REPORT

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

NOTICE OF INIENIT NO 22806

1. OWNER Bureau of Reclamation ADDRESS AT WELL LOCATION _____
 MAILING ADDRESS PO Box 61470 _____
Boulder City NV 89006 _____
 2. LOCATION SE 1/4 SW 1/4 Sec 30 T 21 N/S R 63 E CLARK County _____
 PERMIT NO 1603000003 Issued by Water Resources Parcel No. _____ Subdivision Name _____

3. WORK PERFORMED
 New Well Replace Recondition
 Deepen Abandon Other _____
 4. PROPOSED USE
 Domestic Irrigation Test
 Municipal/Industrial Monitor Stock
 5. WELL TYPE
 Cable Rotary RVC
 Air Other HSA

6. WMW 6155 LITHOLOGIC LOG

Material	Water Strata	From	To	Thick-ness
<u>SAND & GRAVEL</u>		<u>0</u>	<u>2</u>	<u>2</u>
<u>BROWN SAND - Silty SAND</u>		<u>2</u>	<u>7.5</u>	<u>5.5</u>
<u>SAND & Gravel</u>		<u>7.5</u>	<u>20</u>	<u>12.5</u>

8. WELL CONSTRUCTION
 Depth Drilled 20 Feet Depth Cased 17.5 Feet
 HOLE DIAMETER (BIT SIZE)
 From 10 1/4 Inches To 20 Feet
 _____ Inches _____ Feet
 _____ Inches _____ Feet

CASING SCHEDULE

Size O.D (Inches)	Weight/Ft (Pounds)	Wall Thickness (Inches)	From (Feet)	To (Feet)
<u>4</u>	<u>SCH 40</u>		<u>7.5</u>	<u>7.5</u>

Perforations: Machine Slotted
 Type perforation _____
 Size perforation .020
 From 7.5 feet to 17.5 feet
 From _____ feet to _____ feet
 From _____ feet to _____ feet
 From _____ feet to _____ feet
 From _____ feet to _____ feet

Surface Seal: Yes No
 Depth of Seal 3 5 10 5.5
 Placement Method: Pumped Poured
 Seal Type: Neat Cement Cement Grout Concrete Grout
 Gravel Packed: Yes No
 From _____ feet to _____ feet

9. WATER LEVEL
 Static water level 7.5 feet below land surface
 Artesian flow _____ GPM _____ PSI
 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 BAGIE DRILLING SERVICES LLC
 Address 7150 PLACID RD
LAS VEGAS NV 89119

Date started 5/9/02 2002 10
 Date completed 5/9/02 2002 10

7. WELL TEST DATA

TEST METHOD: <input type="checkbox"/> Bailer <input type="checkbox"/> Pump <input type="checkbox"/> Air Lift			
GPM	Draw Down (Feet Below Static)	Time (Hours)	

Nevada contractor's license number 51266 issued by the State Contractor's Board.
 Nevada driller's license number issued by the Division of Water Resources, the on-site driller M 2173
 Signed Willis Suppa
 By driller performing actual drilling on site or contractor
 Date 5/10/02

long recovery time

SOUTHERN NEVADA WATER AUTHORITY

WELL LOG

WMW 5.58 S (d)

PROJECT: J. F. Leising research

COMPLETION DATE: 5/14/02

HOLE LOCATION: 5.58 south

EQUIPMENT: B-90

BORE HOLE SIZE (diameter): 10 1/4 in.

LOGGED BY: B. Quinn

CASING SIZE/TYPE: 4-in. sched. 40 PVC

COLLAR ELEVATION: _____

COORDINATES: _____

INITIAL STATIC WATER LEVEL: 19.4 fbls

DATE MEASURED: 5/15/02

24-hr STATIC WATER LEVEL: 10.16 (Toc)

DATE MEASURED: 5/24/02

ELEVATION/ DEPTH	SOIL/ROCK SYMBOL	LITHOLOGIC DESCRIPTION	WELL CONSTRUCTION
		<p>Gravel coarse 1"-2" cobbles</p>	<p>steel riser</p> <p>Cement</p> <p>grout seal</p>


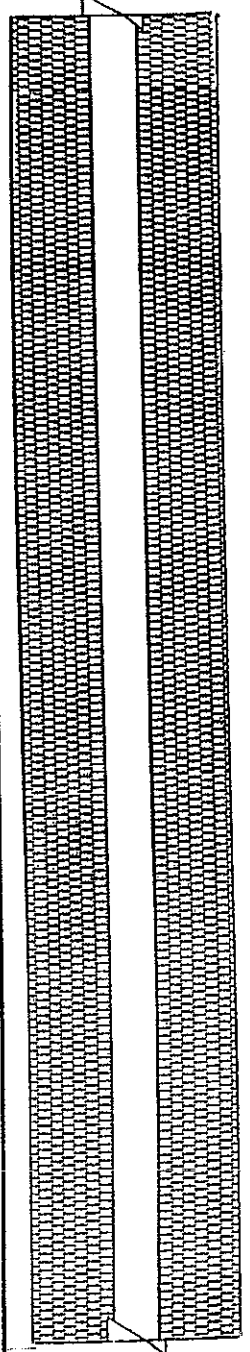
SOUTHERN NEVADA WATER AUTHORITY

WELL LOG

WMW 5.58 S (d)

PROJECT: J. F. Leising research
 HOLE LOCATION: 5.58 south
 BORE HOLE SIZE (diameter): 10 1/4 in.
 CASING SIZE/TYPE : 4-in. sched. 40 PVC
 COLLAR ELEVATION: _____
 INITIAL STATIC WATER LEVEL: _____
 24-hr STATIC WATER LEVEL: _____

COMPLETION DATE: 5/14/02
 EQUIPMENT: B-90
 LOGGED BY: B. Quinn
 COORDINATES: _____
 DATE MEASURED: _____
 DATE MEASURED: _____

ELEVATION/ DEPTH	SOIL/ROCK SYMBOL	LITHOLOGIC DESCRIPTION	WELL CONSTRUCTION
<div style="display: flex; flex-direction: column; align-items: center;"> <div style="margin-bottom: 10px;">25</div> <div style="margin-bottom: 10px;">30</div> <div style="margin-bottom: 10px;">35</div> <div style="margin-bottom: 10px;">40</div> <div style="margin-bottom: 10px;">45</div> <div style="margin-bottom: 10px;">50</div> <div style="margin-bottom: 10px;">53</div> </div>		<p style="text-align: center;"><i>Gravel</i></p> <hr style="border-top: 1px dashed black;"/> <p style="text-align: center;"><i>Clay, dark grey dense, stiff</i></p> <hr style="border-top: 1px dashed black;"/> <p style="text-align: center;"><i>Gravel</i></p> <hr style="border-top: 1px dashed black;"/> <p style="text-align: center;"><i>Clay, dark grey dense, stiff</i></p> <hr style="border-top: 1px dashed black;"/> <p style="text-align: center;"><i>silt</i></p> <hr style="border-top: 1px dashed black;"/> <p style="text-align: center;"><i>Clay, dark grey dense, stiff</i></p>	

SOUTHERN NEVADA WATER AUTHORITY

WELL LOG

WMW 5.58 S (d)

PROJECT: J. F. Leising research
 HOLE LOCATION: 5.58 south
 BORE HOLE SIZE (diameter): 10 1/4 in.
 CASING SIZE/TYPE: 4-in. sched. 40 PVC
 COLLAR ELEVATION: _____
 INITIAL STATIC WATER LEVEL: _____
 24-hr STATIC WATER LEVEL: _____

COMPLETION DATE: 5/14/02
 EQUIPMENT: B-90
 LOGGED BY: B. Quinn
 COORDINATES: _____
 DATE MEASURED: _____
 DATE MEASURED: _____

ELEVATION/ DEPTH	SOIL/ROCK SYMBOL	LITHOLOGIC DESCRIPTION	WELL CONSTRUCTION
53	[Symbol: Diagonal lines]	<i>silt</i>	[Symbol: Diagonal lines]
55	[Symbol: Diagonal lines]	<i>clay, dark grey hydrocarbon odor dense, STIFF noted between 54-57 ft.</i>	[Symbol: Diagonal lines]
60	[Symbol: Dotted pattern]	<i>silty sand, occasional clay layers gypsiferous</i>	[Symbol: Dotted pattern]
65	[Symbol: Dotted pattern]	<i>#3 sand pack</i>	[Symbol: Dotted pattern]
70	[Symbol: Dotted pattern]	<i>0.02" machine slotted screen</i>	[Symbol: Dotted pattern]
75	[Symbol: Dotted pattern]	<i>coarse grained, sandy gravel</i>	[Symbol: Dotted pattern]
80	[Symbol: Dotted pattern]	<i>END OF BORING @ 80.0 FT Ground water @ 19.4 ft.</i>	[Symbol: Dotted pattern]

Log No _____
 Permit No _____
 Basin _____

PRINT OR TYPE ONLY
 DO NOT WRITE ON BACK

WELL DRILLER'S REPORT

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

NOTICE OF INTENT NO 22804

1. OWNER Bureau of Reclamation ADDRESS AT WELL LOCATION _____
 MAILING ADDRESS PO Box 61470
Boulder City NV 89006

2. LOCATION SE 1/4 SE 1/4 Sec 30 T 21 N/S R 63 E CLARK County
 PERMIT NO 160-30-000-003 Parcel No. _____ Subdivision Name _____
 Issued by Water Resources

3. WORK PERFORMED
 New Well Replace Recondition
 Deepen Abandon Other _____

4. PROPOSED USE
 Domestic Irrigation Test
 Municipal/Industrial Monitor Stock

5. WELL TYPE
 Cable Rotary RYC
 Air Other MSA

6. W.M.W. 5.85 LITHOLOGIC LOG

Material	Water Strata	From	To	Thick-ness
<u>GRAVEL</u>		<u>0</u>	<u>40</u>	<u>40</u>
<u>CLAY</u>		<u>40</u>	<u>44</u>	<u>4</u>
<u>GRAVEL</u>		<u>44</u>	<u>45</u>	<u>1</u>
<u>CLAY</u>		<u>45</u>	<u>48</u>	<u>3</u>
<u>SILT</u>		<u>48</u>	<u>51</u>	<u>3</u>
<u>CLAY</u>		<u>51</u>	<u>53</u>	<u>2</u>
<u>SILT</u>		<u>53</u>	<u>54</u>	<u>1</u>
<u>CLAY</u>		<u>54</u>	<u>57</u>	<u>3</u>
<u>SILTY SAND</u>		<u>57</u>	<u>80</u>	<u>23</u>

8. WELL CONSTRUCTION
 Depth Drilled _____ Feet Depth Cased _____ Feet

HOLE DIAMETER (BIT SIZE)
10 1/4 Inches From 0 Feet To 80 Feet
 _____ Inches _____ Feet _____ Feet
 _____ Inches _____ Feet _____ Feet

CASING SCHEDULE

Size O.D (Inches)	Weight/Ft (Pounds)	Wall Thickness (Inches)	From (Feet)	To (Feet)
<u>4</u>	<u>SCH 40</u>		<u>0</u>	<u>60</u>

Perforations:
 Type perforation MACHINE SLOTTED
 Size perforation 1.020

From 60 feet to 80 feet
 From _____ feet to _____ feet
 From _____ feet to _____ feet
 From _____ feet to _____ feet
 From _____ feet to _____ feet

Surface Seal: Yes No Seal Type:
 Depth of Seal 56 to 58 Neat Cement
 Placement Method: Pumped Cement Grout
 Poured Concrete Grout

Gravel Packed: Yes No
 From 58 feet to 80 feet

9. WATER LEVEL
 Static water level 6.3 feet below land surface
 Artesian 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 EAGLE DRILLING SERVICES LLC Contractor
 Address 7150 Pineda RD
LAS VEGAS NV 89119 Contractor

Nevada contractor's license number 51266
 issued by the State Contractor's Board

Nevada driller's license number issued by the Division of Water Resources, the on-site driller.

Signed Victor
 By driller performing actual drilling on site or contractor

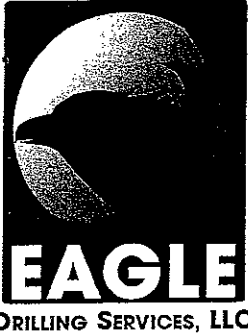
Date 05-15-02

Date started 5/14 2002, 19____
 Date completed 5/14, 19____

7. WELL TEST DATA

TEST METHOD: Bailer Pump Air Lift

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



EAGLE DRILLING SERVICES, LLC
 7150 PLACID STREET
 LAS VEGAS, NEVADA 89119
 702-341-5873 Fax 702-341-7120

Date: 05-10-02
 Eagle Job No: E114 BR
 Client: Natur Resources
 Location: Las Vegas Wash
 Field Rep: Bill Quinn

DRILLERS DAILY DRILL REPORT
 ACCOUNTING FOR DAILY ACTIVITY BY HOUR

SAFETY MEETING

FROM	TO	TOTAL HRS	CODE	
0600	0630	0.30		Yard
0630	0700	0.30		Mobe
0700	1530	8.30		Drill, Install Wells, 1 Vault
1530	1630	1.0		DeMobe
		10.50		

Code	Description	No Units
	Drill Rig (D-50)	1
	Crew Truck 3491700	11
	Steam Cleaner	
	Generator	
	Compressor	
	Water Trailer	1
	Gooseneck Trailer	1
	Decon Trailer	
	Drums	
	Bentonite Chips - Bags	2
	Ready Mix - Bags	10
	Bentonite Grout - Bags	

Code	Description	Units
	Bentonite Powder - Bags	
	Portland Cement - Bags	
	Sand - Bags	10
	Wellbox	2
	4" x 10' PVC Screen	2
	4" x 5' PVC Screen	1
	4" x 10' PVC Casing	2
	4" PVC End Cap	2
	4" Locking Cap	2

SUMMARY OF DRILLING ACTIVITIES				
Bore/Well		WMW-50	WMW-5.7A	
Footage		0-14.0	0-19.0	
		14.0	19.0	
SCREEN		4.0	4.0	
		4.0	4.0	
CASING		+3.0	+3.0	
		14.0	19.0	



EAGLE DRILLING SERVICES, LLC
 7150 PLACID STREET
 LAS VEGAS, NEVADA 89119
 702-341-5873 Fax 702-341-7120

Date: 05-13-02
 Eagle Job No: E 114 BR
 Client: Native Resources
 Location: Las Vegas Wash
 Field Rep: Bill Quinn

DRILLERS DAILY DRILL REPORT
 ACCOUNTING FOR DAILY ACTIVITY BY HOUR

SAFETY MEETING

FROM	TO	TOTAL HRS	CODE	
0600	0630	0.30		Yard
0630	0700	0.50		Mobile
0700	1500	8.0		Drill, Install Well & Vault
1500	1530	0.30		
		9.10		

Code	Description	No Units
	Drill Rig (D-50 + B-90)	1
	Crew Truck 3/4 + 1 Ton	1
	Steam Cleaner	
	Generator	
	Compressor	
	Water Trailer	
	Gooseneck Trailer	1
	Decon Trailer	
	Drums	
	Bentonite Chips - Bags	1
	Ready Mix - Bags	6
	Bentonite Grout - Bags	

Code	Description	Units
	Bentonite Powder - Bags	
	Portland Cement - Bags	
	Sand - Bags	6
	Wellbox	1
	4" x 10' PVC Screen	1
	4" x 5' PVC Screen	1
	4" x 10' PVC Casing	1
	4" PVC END CAP	1
	4" Locking Cap	1

SUMMARY OF DRILLING ACTIVITIES

Bore/Well	WMWJ-585	WMW-			
Footage	0.20	0.55			
SCREEN	20.0				
	5.0				
CASING	5.0				
	13.0				



EAGLE DRILLING SERVICES, LLC
 7150 PLACID STREET
 LAS VEGAS, NEVADA 89119
 702-341-5873 Fax 702-341-7120

Date:	05-14-02
Eagle Job No:	EB114BK
Client:	Nature Resource
Location:	Las Vegas Wash
Field Rep:	Bill Quinn

DRILLERS DAILY DRILL REPORT
 ACCOUNTING FOR DAILY ACTIVITY BY HOUR

SAFETY MEETING

FROM	TO	TOTAL HRS	CODE	
0600	1000	4.0		Yard
1000	1030	0.50		Mobc
1030	2030	10.30		Drill + Install Well + Vault
2030	2100	0.50		Do Mobc
		15.0		

Code	Description	No Units
	Drill Rig (B-90)	1
	Crew Truck 3/4 Ton	1
	Steam Cleaner	
	Generator	
	Compressor	
	Water Trailer	
	Gooseneck Trailer	
	Decon Trailer	
	Drums	
	Bentonite Chips - Bags	30
	Ready Mix - Bags	10
	Bentonite Grout - Bags	

Code	Description	Units
	Bentonite Powder - Bags	
	Portland Cement - Bags	
	Sand - Bags	9
	Wellbox	1

SUMMARY OF DRILLING ACTIVITIES						
Bore/Well						
Footage		wmw				
		55-80				
		80.0				
SCREEN		60.0				
		60.0				
CASING		+3.0				
		20.0				