

APPENDIX C  
UTAH WELL DRILLER'S REPORTS  
FOR LISBON VALLEY MINE  
WATER SUPPLY WELLS

Prepared for

*Lisbon Valley Mining Co., LLC*  
*920 S. County Rd 313*  
*P.O. Box 248*  
*La Sal, UT 84530*

Prepared by

*Whetstone Associates, Inc.*  
*137 W. Ryus Street*  
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*719-742-5155*

*Document 4124E.060131*

January, 2006

WLI

# WELL DRILLER'S REPORT

State of Utah  
Division of Water Rights

RECEIVED  
SEP 13 1997

For additional space, use "Additional Well Data Form" and a WATER RIGHT S

Well Identification WATER RIGHT APPLICATION: 05-2593 (F69971)

Owner *Note any changes*  
Summo USA Corporation  
1776 Lincoln Street #900  
Denver, CO 80203

Contact Person/Engineer:

Well Location *Note any changes*  
COUNTY: San Juan  
NORTH 3403 feet WEST 640 feet from the SE Corner of  
SECTION 26, TOWNSHIP 30S, RANGE 25E, SLB&M.

Location Description: (address, proximity to buildings, landmarks, ground elevation, local well #) Well S-3

Drillers Activity Start Date: 8-1-97 Completion Date: 8-23-97

Check all that apply:  New  Repair  Deepen  Abandon  Replace  Public  OTH Nature of Use:

DEPTH (feet) FROM TO		BOREHOLE DIAMETER (in)	DRILLING METHOD	DRILLING FLUID
0	20	20"	Air Rotary	None
20	360	13 1/2"	Air/Mud Rotary	Foaming agent, Bentonite, Polymer

Well Log		WATER	PERMEABLE High low	UNCONSOLIDATED					CONSOLIDATED		ROCK TYPE	COLOR	DESCRIPTIONS AND REMARKS (include comments on water quality if known.)
DEPTH (feet) FROM TO	C			S	G	C	B	O	H	E			
0	40				X						Alluvium	Red-Brown	Very fine grained.
40	200			X									
200	235	X				X							
235	250		X	X									
250	275					X							
275	280			X		X							
280	320			X		X							
320	360					X							
												At approximately 360-363 feet a fault gouge (sticky clay) was encountered.	

Static Water Level

Date 8/23/97 Water Level 67 feet Flowing?  Yes  No  
 Method of Water Level Measurement Well sounder If Flowing, Capped Pressure PSI  
 Point to Which Water Level Measurement was Referenced Ground level  
 Height of Water Level reference point above ground surface feet Temperature  °C  °F

**Construction Information**

DEPTH (feet)		CASING			DEPTH (feet)		SCREEN <input checked="" type="checkbox"/>		PERFORATIONS <input type="checkbox"/>
FROM	TO	CASING TYPE AND MATERIAL GRADE	WALL THICK (in)	NOMINAL DIAM. (in)	FROM	TO	SLOT SIZE OR PERF SIZE (in)	SCREEN DIAM. OR PERF LENGTH (in)	SCREEN TYPE OR NUMBER PERF (per round/interval)
0	20	A53 Grade B	.250	20	154	174	0.020	8 5/8	Wire Wrap
0	154	A53 Grade B	.322	8	195	235	0.020	8 5/8	Wire Wrap
174	195				250	290	0.020	8 5/8	Wire Wrap
235	250				293	353	0.020	8 5/8	Wire Wrap
290	293								
353	360								

Well Head Configuration: Locking cap above grade Access Port Provided?  Yes  No  
 Casing Joint Type: Welded Connections Perforator Used: \_\_\_\_\_

DEPTH (feet)		FILTER PACK / GROUT / PACKER / ABANDONMENT MATERIAL		
FROM	TO	ANNULAR MATERIAL, ABANDONMENT MATERIAL and/or PACKER DESCRIPTION	Quantity of Material Used (if applicable)	GROUT DENSITY (lbs./gal., # bag mix, gal./sack etc.)
64	360	16 - 30 Colorado Silica Sand	157 ea. 100# bags	
0	64	Grout Seal	30 Bags	

**Well Development / Pump or Bail Tests**

Date	Method	Yield	Units Check One		DRAWDOWN (ft)	TIME PUMPED (hrs & min)
			GPM	CFS		
8/12/97	Bail / Surge Block					
8/22-8/23/97	Airlift					

**Pump (Permanent)**

Pump Description: Not Installed Horsepower: \_\_\_\_\_ Pump Intake Depth: \_\_\_\_\_ feet  
 Approximate maximum pumping rate: \_\_\_\_\_ Well disinfected upon completion?  Yes  No

Comments: Description of construction activity, additional materials used, problems encountered, extraordinary circumstances, abandonment / procedures. Use additional well data form for more space.

**Well Driller Statement** This well was drilled or abandoned under my supervision, according to applicable rules and regulations, and this report is complete and correct to the best of my knowledge and belief.

Name Layne-Western License No. 188  
 (Person, Firm, or Corporation - Print or Type)  
 Signature David A. Tormo Date 8/28/97  
 (Licensed Well Driller)  
 David A. Tormo

# WELL DRILLER'S REPORT

State of Utah  
Division of Water Rights

For additional space, use "Additional Well Data Form" and

**RECEIVED**

NOV 12 1997

Well Identification MONITOR WELL: 97-05-001-M-05

Owner *Note any changes*  
Summo USA Corporation  
P.O. Box 847  
Moab, UT 84532

WATER RIGHTS  
SALT LAKE

Contact Person/Engineer: \_\_\_\_\_

Well Location *Note any changes*  
SOUTH 750 feet WEST 1575 feet from the NE Corner of  
SECTION 1, TOWNSHIP 30S, RANGE 25E, SLB&M.

Location Description: (address, proximity to buildings, landmarks, ground elevation, local well #) PW 97-2

Drillers Activity Start Date: Sept 3, 1997 Completion Date: Sept 24, 1997  
Check all that apply:  
 New  Repair  Deepen  Abandon  Replace  Public Nature of Use:

DEPTH (feet) FROM TO	BOREHOLE DIAMETER (in)	DRILLING METHOD	DRILLING FLUID
0 750		Rotary	air

Well Log	WATER	PERMEABLE	UNCONSOLIDATED					CONSOLIDATED		ROCK TYPE	COLOR	DESCRIPTIONS AND REMARKS (include comments on water quality if known.)
			C L A Y	S I L T	S A N D	G R A V E L	C O U B L E S	B O U L D E R	OTHER			
0 30									X	med stone cray stone		Grey & Brown
30 85									X	sand stone		Grey & Buff colored fine sandstone
85 90									X	conglomerate		Buff colored
90 165									X	sandstone Kernstone		Green Grey Buff & Purple
165 240									X	sand stone		Buff Tan & White
240 285									X	sand stone conglomerate		White, Tan Grey & Brown
285 315									X	sand stone silt		White Brown Green
315 465									X	silt stone silt sandstone		Red Brown & Green
465 505									X	silt stone		Brown Green & Gray
505 555									X	siltstone limestone		Green & Grey

Static Water Level  
 Date \_\_\_\_\_ Water Level \_\_\_\_\_ feet Flowing?  Yes  No  
 Method of Water Level Measurement \_\_\_\_\_ If Flowing, Capped Pressure \_\_\_\_\_ PSI  
 Point to Which Water Level Measurement was Referenced \_\_\_\_\_  
 Height of Water Level reference point above ground surface \_\_\_\_\_ feet Temperature \_\_\_\_\_  °C  °F

Well Log



**Construction Information**

DEPTH (feet)		CASING			DEPTH (feet)		SCREEN <input type="checkbox"/>		PERFORATIONS <input type="checkbox"/>
FROM	TO	CASING TYPE AND MATERIAL GRADE	WALL THICK (in)	NOMINAL DIAM. (in)	FROM	TO	SLOT SIZE OR PERF SIZE (in)	SCREEN DIAM. OR PERF LENGTH (in)	SCREEN TYPE OR NUMBER PER (per round/interval)

Well Head Configuration: \_\_\_\_\_ Access Port Provided?  Yes  No  
 Casing Joint Type: \_\_\_\_\_ Perforator Used: \_\_\_\_\_

DEPTH (feet)		FILTER PACK / GROUT / PACKER / ABANDONMENT MATERIAL		
FROM	TO	ANNULAR MATERIAL, ABANDONMENT MATERIAL and/or PACKER DESCRIPTION	Quantity of Material Used (if applicable)	GROUT DENSITY (lbs./gal., # bag mix, gal./sack etc.)
0	15	14 3/4" Steel Casing cemented in drilled 14 3/4" hole set 13" casing in		

**Well Development / Pump or Bail Tests**

Date	Method	Yield	Units Check One		DRAWDOWN (ft)	TIME PUMPED (hrs & min)
			GPM	CFS		

**Pump (Permanent)**

Pump Description: \_\_\_\_\_ Horsepower: \_\_\_\_\_ Pump Intake Depth: \_\_\_\_\_ feet  
 Approximate maximum pumping rate: \_\_\_\_\_ Well disinfected upon completion?  Yes  No

**Comments** Description of construction activity, additional materials used, problems encountered, extraordinary circumstances, abandonment / procedures. Use additional well data form for more space.  
 Hole was later grouted @ 20-750.  
 Grout 20 1/2 bags  
 Coated pellets 2 buckets Cement 4 bags  
 Sand 2 bags

**Well Driller Statement**

This well was drilled or abandoned under my supervision, according to applicable rules and regulations, and this report is complete and correct to the best of my knowledge and belief.

Name H. E. Deerman Drilling License No. 218  
 Signature H. E. Deerman Date Nov 7, 1997  
 (Person, Firm, or Corporation - Print or Type) (Licensed Well Driller)

# WELL DRILLER'S REPORT

State of Utah

Division of Water Rights

For additional space, use "Additional Well Data Form" and attach

PW-3

**Well Identification**

Water Right: 05-2593

WIN: 29601

**Owner**

*Note any changes*

Lisbon Valley Mining Co LLC  
c/o Gregory A. Hahn, Pres. Summo USA Corporation  
1776 Lincoln Street Suite 900  
Denver CO 80203

Contact Person/Engineer: WHETSTONE ASSOC./SUSAN WYMAN

**Well Location**

*Note any changes*

N 2151 E 597 from the SW corner of section 25, Township 30S, Range 25E, SL B&M

Location Description: (address, proximity to buildings, landmarks, ground elevation, local well #)

PW-3

**Drillers Activity**

Start Date: 5/12/04

Completion Date: 5/24/04

Check all that apply:  New  Repair  Deepen  Clean  Replace  Public Nature of Use: MINING ACTIVITIES

If a replacement well, provide location of new well. \_\_\_\_\_ feet north/south and \_\_\_\_\_ feet east/west of the existing well.

DEPTH (feet) FROM TO		BOREHOLE DIAMETER (in)	DRILLING METHOD	DRILLING FLUID
0	16	1 3/4	AIR ROTARY	WATER + Foam
16	485	1 1/4	AIR ROTARY	WATER + Foam

**Well Log**

DEPTH (feet) FROM TO	WATER	UNCONSOLIDATED							CONSOLIDATED		DESCRIPTION AND REMARKS (e.g., relative %, grain size, sorting, angularity, bedding, grain composition density, plasticity, shape, cementation, consistency, water bearing, odor, fracturing, mineralogy, texture, degree of weathering, hardness, water quality, etc.)	
		High	Low	CLAY	SILT	SAND	GRAVEL	COBBLES	OTHER	ROCK TYPE		COLOR
0				XX						Shale	Gray	MANCOS shale Formation
130				X		X				SANDSTONE	Lt. Gray	med. Hard Sandstone
180				XX						Shale	Black	Fractured up
195		XX				X				SANDSTONE	Lt. Gray	med. Hard Sandstone
295		XX				X				SANDSTONE	White	med. Hard. "
340		XX				XX				Mudstone	maroon green	Cemented
390		XX				XX				Limestone + mudstone	Green/Gray	Cemented / Fractured
470		X				X				Siltstone	maroon green	Morrison Formation

**Static Water Level**

Date 5/23/04 Water Level 199 feet Flowing?  Yes  No

Method of Water Level Measurement Electric Sounder If Flowing, Capped Pressure \_\_\_\_\_ PSI

Point to Which Water Level Measurement was Referenced Ground Level Elevation \_\_\_\_\_

Height of Water Level reference point above ground surface \_\_\_\_\_ feet Temperature \_\_\_\_\_ degrees  C  F

**Construction Information**

DEPTH (feet)		CASING			DEPTH (feet)		<input type="checkbox"/> SCREEN	<input checked="" type="checkbox"/> PERFORATIONS	<input type="checkbox"/> OPEN BOTTOM
FROM	TO	CASING TYPE AND MATERIAL/GRADE	WALL THICK (in)	NOMINAL DIAM. (in)	FROM	TO	SCREEN SLOT SIZE OR PERF SIZE (in)	SCREEN DIAM. OR PERF LENGTH (in)	SCREEN TYPE OR NUMBER PL. (per round/interval)
+ 2'	302	Low Carbon J-55 T/c	.277	8 5/8	302	386	1/16	8 5/8	36 Slot For
386	426	Low Carbon J-55 T/c	.277	8 5/8	426	468	1/16	8 5/8	36 Slot For
468	476	"	"						Low Carbon

Well Head Configuration: Steel Lutting Cap Access Port Provided?  Yes  No  
 Casing Joint Type: Threaded & Coupled Perforator Used: Factory Slotted  
 Was a Surface Seal Installed?  Yes  No Depth of Surface Seal: 134 feet Drive Shoe?  Yes  No  
 Surface Seal Material Placement Method: Cement Grout, Redi mix truck, Freefall

DEPTH (feet)		SURFACE SEAL / INTERVAL SEAL / FILTER PACK / PACKER INFORMATION		
FROM	TO	SEAL MATERIAL, FILTER PACK and PACKER TYPE and DESCRIPTION	Quantity of Material Used (if applicable)	GROUT DENSITY (lbs./gal., # bag mix, gal./sack etc.)
0	134'	Cement Grout	3 cu yds	10 sk Cement/Sand
134'	158'	Formation Case IN (Shale & clay)		
158	476	Filter Pack	5 cu yds	8X12 Colo Silica
474	476	Cement Plug in side casing		

**Well Development and Well Yield Test Information**

DATE	METHOD	YIELD	Units Check One		DRAWDOWN (ft)	TIME PUMPED (hrs & min)
			GPM	CFS		
5/17/04	Air Jet / Develop	Estimate <del>25</del>	75			4 Hr
5/23 & 24/04	Test Pump Clearic Submersible		97		15' (2M')	24 Hr

**Pump (Permanent)**

Pump Description: \_\_\_\_\_ Horsepower: \_\_\_\_\_ Pump Intake Depth: \_\_\_\_\_ feet  
 Approximate Maximum Pumping Rate: \_\_\_\_\_ Well Disinfected upon Completion?  Yes  No

**Comments** Description of construction activity, additional materials used, problems encountered, extraordinary Circumstances, abandonment procedures. Use additional well data form for more space.  
No permanent Pump Unit installed as of 6/16/04

**Well Driller Statement** This well was drilled and constructed under my supervision, according to applicable rules and regulations, and this report is complete and correct to the best of my knowledge and belief.

Name BEEMAN, BOB DRILLING COMPANY License No. 396  
 Signature [Signature] Date 6/15/04  
(Licensed Well Driller)



# WELL DRILLER'S REPORT

PW-4

State of Utah

Division of Water Rights

For additional space, use "Additional Well Data Form" and attach

**Well Identification**

Temporary Change Application: t29010 (05-2593)

WIN: 29646

**Owner**

*Note any changes*

Lisbon Valley Mining Co. LLC  
1776 Lincoln Street Suite 900  
Denver, Colorado 80203

Contact Person/Engineer: Whetstone & Assoc. ATTN Susan Wyman

**Well Location**

*Note any changes*

N 4008 W 1391 from the SE corner of section 26, Township 30S, Range 25E, SL B&M

Location Description: (address, proximity to buildings, landmarks, ground elevation, local well #) PW-4

**Drillers Activity**

Start Date: 5/18/04 Completion Date: 6/13/04

Check all that apply:  New  Repair  Deepen  Clean  Replace  Public Nature of Use: Mining Activities  
If a replacement well, provide location of new well. \_\_\_\_\_ feet north/south and \_\_\_\_\_ feet east/west of the existing well.

DEPTH (feet) FROM	TO	BOREHOLE DIAMETER (in)	DRILLING METHOD	DRILLING FLUID
0	25	14 3/4	Air Rotary	Water & Foam
25	430	12 1/4	Air Rotary	
340	430	12 1/4	Mud Rotary (Condition Hole)	Bentonite/Gell + Water

**Well Log**

DEPTH (feet) FROM TO		WATER High Low	PERMEABLE	UNCONSOLIDATED						CONSOLIDATED		DESCRIPTION AND REMARKS (e.g., relative %, grain size, sorting, angularity, bedding, grain composition density, plasticity, shape, cementation, consistency, water bearing, order, fracturing, mineralogy, texture, degree of weathering, hardness, water quality, etc.)	
				CLAY	SAND	GRAVEL	COBBLES	BOULDER	OTHER	ROCK TYPE	COLOR		
0	25'			XX							Topsil/alluvium	Red Brown	alluvium/top soil Sand etc.
25'	90'			X							Shale	Gray	Manco's Shale
90'	225'				X						Sandstone	Lt. Gray	Fine-med Grained Cemented Sand
225'	305'				X						Silt/mudstone	Green/purple	Fractured up & cemented
305'	430'	XX			X						Sandstone	White	Fractured up

**Static Water Level**

Date 6-13-04 Water Level \_\_\_\_\_ feet Flowing?  Yes  No  
 Method of Water Level Measurement Electric Sounder If Flowing, Capped Pressure \_\_\_\_\_ PSI  
 Point to Which Water Level Measurement was Referenced Ground Surface Elevation \_\_\_\_\_  
 Height of Water Level reference point above ground surface \_\_\_\_\_ feet Temperature \_\_\_\_\_ degrees  C  F

**Construction Information**

DEPTH (feet)		CASING			DEPTH (feet)		<input type="checkbox"/> SCREEN	<input checked="" type="checkbox"/> PERFORATIONS	<input checked="" type="checkbox"/> OPEN BOTTOM
FROM	TO	CASING TYPE AND MATERIAL/GRADE	WALL THICK (in)	NOMINAL DIAM. (in)	FROM	TO	SCREEN SLOT SIZE OR PERF SIZE (in)	SCREEN DIAM. OR PERF LENGTH (in)	SCREEN TYPE OR NUMBER PERF (per round/interval)
290	415	Low Carbon J-55	.277	8 5/8	290	415	1/16	8 5/8	36 Slots foot Low Carbon
415	425	"	"						

Well Head Configuration: Steel Locking Cap Access Port Provided?  Yes  No  
 Casing Joint Type: Threaded & Coupled Perforator Used: Factory Slotted  
 Was a Surface Seal Installed?  Yes  No Depth of Surface Seal: 195 feet Drive Shoe?  Yes  No  
 Surface Seal Material Placement Method: Cement Grout, Redi mix truck, Freefall

DEPTH (feet)		SURFACE SEAL / INTERVAL SEAL / FILTER PACK / PACKER INFORMATION		
FROM	TO	SEAL MATERIAL, FILTER PACK and PACKER TYPE and DESCRIPTION	Quantity of Material Used (if applicable)	GROUT DENSITY (lbs./gal., # bag mix, gal./sack etc.)
0	195	Cement Grout	5 cu yds	10 SK Cement & Sand
195	425	Filter Pack	8 cu yds	8x12 Colo Silica

**Well Development and Well Yield Test Information**

DATE	METHOD	YIELD	Units Check One		DRAWDOWN (ft)	TIME PUMPED (hrs & min)
			GPM	CFS		
2-23 & 6/10-11/04	Air Jet, Water Jet Surge & SWAB w/chemicals		50			approx 30 Hr
5/13/04	Test Pump Electric Submersible	-30			380	approx 10 Hr

**Pump (Permanent)**

Pump Description: \_\_\_\_\_ Horsepower: \_\_\_\_\_ Pump Intake Depth: \_\_\_\_\_ feet  
 Approximate Maximum Pumping Rate: \_\_\_\_\_ Well Disinfected upon Completion?  Yes  No

Comments: No Permanent Pump Unit Installed as of 6/16/04  
 Description of construction activity, additional materials used, problems encountered, extraordinary Circumstances, abandonment procedures. Use additional well data form for more space.

**Well Driller Statement**

This well was drilled and constructed under my supervision, according to applicable rules and regulations, and this report is complete and correct to the best of my knowledge and belief.

Name: BEEMAN BOB DRILLING COMPANY License No. 396  
 Signature: [Signature] Date: 6/16/04  
(Licensed Well Driller)

# WELL DRILLER'S REPORT

PW-5

State of Utah  
Division of Water Rights

For additional space, use "Additional Well Data Form" and attach

**Well Identification**

Temporary Change Application: t29010 (05-2593)

WIN: 29654

**Owner**

*Note any changes*

Lisbon Valley Mining Co. LLC  
1776 Lincoln Street Suite 900  
Denver, Colorado 80203

Contact Person/Engineer:

*Whetstone Assoc / Susan Wyman*

**Well Location**

*Note any changes*

S 2680 E 14 from the NW corner of section 06, Township 31S, Range 25E, SL B&M

Location Description: (address, proximity to buildings, landmarks, ground elevation, local well #)

*PW-5*

**Drillers Activity**

Start Date: *5/24/04*

Completion Date: *6/6/04*

Check all that apply:  New  Repair  Deepen  Clean  Replace  Public Nature of Use: *Mining Activities*

If a replacement well, provide location of new well. \_\_\_\_\_ feet north/south and \_\_\_\_\_ feet east/west of the existing well.

DEPTH (feet) FROM	TO	BOREHOLE DIAMETER (in)	DRILLING METHOD	DRILLING FLUID
0	24	1 3/4	Air Rotary	Water & Foam
24	630	12 1/4	Air Rotary	Water & Foam / Polymer

**Well Log**

DEPTH (feet) FROM	TO	WATER	PERMEABLE	UNCONSOLIDATED					CONSOLIDATED		ROCK TYPE	COLOR	DESCRIPTION AND REMARKS (e.g., relative %, grain size, sorting, angularity, bedding, grain composition density, plasticity, shape, cementation, consistency, water bearing, odor, fracturing, mineralogy, texture, degree of weathering, hardness, water quality, etc.)
				CLAY	SAND	GRAVEL	COBBLES	BOULDER	OTHER				
0	25'			XX							Alluvium	Red <sup>brown</sup>	Topsoil Sandy, clay
25'	333'			XX							Shale	Gray	Mancos Shale
333'	355'			XX	X						Sandstone	lt. Gray	Cemented Sand & Siltstone
355'	380'				X						Shale	lt. Gray	Sandstone w/ Layer of Coal
380'	410'	XX			X						Sandstone	lt Gray	Sandstone w/ Siltstone Layers
410'	430'	XX			X						Sandstone	lt. Gray	Layers of Coal
430'	465'	XX		X							Clay & Mudstone	Gray	Cemented
465'	475'	XX		X							Chert	Dark Brown	Chert & Conglomerate
475'	610'	XX			X						Sandstone	Green & White	Cemented Sandstone (Multi Colors)
610'	615'			XX							Clay & Mudstone	Brown	Mudstone w/ Siltstone Layers

**Static Water Level**

Date: *6-5-04* Water Level: *265'* feet Flowing?  Yes  No  
 Method of Water Level Measurement: *Electric Sounder* If Flowing, Capped Pressure: \_\_\_\_\_ PSI  
 Point to Which Water Level Measurement was Referenced: *Ground Surface* Elevation: \_\_\_\_\_  
 Height of Water Level reference point above ground surface: \_\_\_\_\_ feet Temperature: \_\_\_\_\_ degrees  C  F

**Construction Information**

DEPTH (feet)		CASING			DEPTH (feet)		<input type="checkbox"/> SCREEN	<input checked="" type="checkbox"/> PERFORATIONS	<input type="checkbox"/> OPEN BOTTOM
FROM	TO	CASING TYPE AND MATERIAL/GRADE	WALL THICK (in)	NOMINAL DIAM. (in)	FROM	TO	SCREEN SLOT SIZE OR PERF SIZE (in)	SCREEN DIAM OR PERF LENGTH (in)	SCREEN TY OR NUMBER (per round/interval)
+2	391	Low Carbon J-55	.277	8 5/8	391'	601'	1/16	8 5/8	Low Carbon 36 Slotted
	601'	Low Carbon J-55	.277	8 5/8					

Well Head Configuration: Steel Locking Cap Access Port Provided?  Yes  No  
 Casing Joint Type: Threaded & coupled Perforator Used: Factory slotted  
 Was a Surface Seal Installed?  Yes  No Depth of Surface Seal: 344' feet Drive Shoe?  Yes  No  
 Surface Seal Material Placement Method: Cement Grout / Tremmie Pipe & Freefall

DEPTH (feet)		SURFACE SEAL / INTERVAL SEAL / FILTER PACK / PACKER INFORMATION		
FROM	TO	SEAL MATERIAL, FILTER PACK and PACKER TYPE and DESCRIPTION	Quantity of Material Used (if applicable)	GROUT DENSITY (lbs./gal., # bag mix, gal./sack etc.)
0	344'	Cement Grout	7 cu yds	10.5K Cement/sack
344'	609'	Filter Pack	4 cu yds	8x12 Colo Silica
607	609	Cement Plug inside casing		

**Well Development and Well Yield Test Information**

DATE	METHOD	YIELD	Units Check One		DRAWDOWN (ft)	TIME PUMPED (hrs & min)
			GPM	CFS		
5/27/04	Air Jet	1	100			4 1/2 Hr
6/5-6/04	Test Pump electric submersible		225		84' (350)	24 Hr

**Pump (Permanent)**

Pump Description: \_\_\_\_\_ Horsepower: \_\_\_\_\_ Pump Intake Depth: \_\_\_\_\_ feet  
 Approximate Maximum Pumping Rate: \_\_\_\_\_ Well Disinfected upon Completion?  Yes  No

**Comments**

Description of construction activity, additional materials used, problems encountered, extraordinary Circumstances, abandonment procedures. Use additional well data form for more space.

No permanent pump unit installed as of 6/17/04

**Well Driller Statement**

This well was drilled and constructed under my supervision, according to applicable rules and regulations, and this report is complete and correct to the best of my knowledge and belief.

Name BEEMAN, BOB DRILLING COMPANY

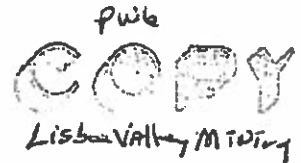
License No. 396

Signature [Signature]

Date 6/17/04

# WELL DRILLER'S REPORT

## State of Utah Division of Water Rights



For additional space, use "Additional Well Data Form" and attach

**Well Identification**

Temporary Change Application: t30128 (05-2593)

WIN: 34181

**Owner**

*Note any changes*

Lisbon Valley Mining Co LLC  
1776 Lincoln Street Suite 900  
Denver CO 80203

Contact Person/Engineer: Chuck Bauer

**Well Location**

*Note any changes*

N 52 E 790 from the SE corner of section 36, Township 30S, Range 25E, SL B&M

Location Description: (address, proximity to buildings, landmarks, ground elevation, local well #) 6620ft. #PW 6

**Drillers Activity**

Start Date: May 10, 2005 Completion Date: June 8, 2005

Check all that apply:  New  Repair  Deepen  Clean  Replace  Public Nature of Use: Industrial

If a replacement well, provide location of new well. \_\_\_\_\_ feet north/south and \_\_\_\_\_ feet east/west of the existing well.

DEPTH (feet) FROM TO		BORHOLE DIAMETER (in)	DRILLING METHOD	DRILLING FLUID
0	30	26"	Auger	Dry
30	620	12"	Reverse Flood	Mud

**Well Log**

DEPTH (feet) FROM TO	WATER	INCONSOLIDATED		CONSOLIDATED				ROCK TYPE	COLOR	DESCRIPTION AND REMARKS (e.g., relative %, grain size, sorting, angularity, bedding, grain composition density, plasticity, shape, cementation, consistency, water bearing, odor, fracturing, mineralogy, texture, degree of weathering, hardness, water quality, etc.)
		CLAY	SAND	GRAVEL	COBBLES	BOULDER	OTHER			
0			X						Brn.	
20		X							Red	
25		X							Tan	
30								Shale	Gry.	
270								shaly shl.	Lite gry	
300								Coal	Blk.	
305								Shale	Gry.	
470								Shale	Grn.	
505								Sandstone	Tan	Med. to crs., some cementation
525								Shale	Gry.	

**Static Water Level**

Date 6-5-05 Water Level 253 feet Flowing?  Yes  No  
 Method of Water Level Measurement Electric snr If Flowing, Capped Pressure \_\_\_\_\_ PSI  
 Point to Which Water Level Measurement was Referenced Ground lvl Elevation 6620'  
 Height of Water Level reference point above ground surface 0 feet Temperature 60 degrees  C  F



**Construction Information**

DEPTH (feet)		CASING			DEPTH (feet)		<input type="checkbox"/> SCREEN	<input type="checkbox"/> PERFORATIONS	<input type="checkbox"/> OPEN BOTTOM
FROM	TO	CASING TYPE AND MATERIAL/GRADE	WALL THICK (in)	NOMINAL DIAM. (in)	FROM	TO	SCREEN SLOT SIZE OR PERF SIZE (in)	SCREEN DIAM. OR PERF LENGTH (in)	SCREEN TYPE OR NUMBER PERF (per round/interval)
0	30	LCS grd. B	.375	18"	435	603		ø62x2.5"	1 1/2 /ft.
+24"	435	LCS GRD. B	.250	8"					

Well Head Configuration: 24" stickup with locking cap Access Port Provided?  Yes  No

Casing Joint Type: Welded Perforator Used: mill slot

Was a Surface Seal Installed?  Yes  No Depth of Surface Seal: 267 feet Drive Shoe?  Yes  No

Surface Seal Material Placement Method: Tremied

Was a temporary surface casing used?  Yes  No If yes, depth of casing: \_\_\_\_\_ feet diameter: \_\_\_\_\_ inches

DEPTH (feet)		SURFACE SEAL / INTERVAL SEAL / FILTER PACK / PACKER INFORMATION		
FROM	TO	SEAL MATERIAL, FILTER PACK and PACKER TYPE and DESCRIPTION	Quantity of Material Used (if applicable)	GROUT DENSITY (lbs./gal., # bag mix, gal./sack etc.)
0	267	NEAT CEMENT	145 cub.ft.	15 ppg.
267	620	6-9-Colorado Silica	170 cub.ft.	

**Well Development and Well Yield Test Information**

DATE	METHOD	YIELD	Units Check One		DRAWDOWN (ft)	TIME PUMPED (hrs & min)
			GPM	CFS		
6-3-05	Airlift	200	X			5hrs
6-5-05	Submersible pump	300	X		132'	24hrs

**Pump (Permanent)**

Pump Description: \_\_\_\_\_ Horsepower: \_\_\_\_\_ Pump Intake Depth: \_\_\_\_\_ feet

Approximate Maximum Pumping Rate: \_\_\_\_\_ Well Disinfected upon Completion?  Yes  No

**Comments**

Description of construction activity, additional materials used, problems encountered, extraordinary Circumstances, abandonment procedures. Use additional well data form for more space.

**Well Driller Statement**

This well was drilled and constructed under my supervision, according to applicable rules and regulations, and this report is complete and correct to the best of my knowledge and belief.

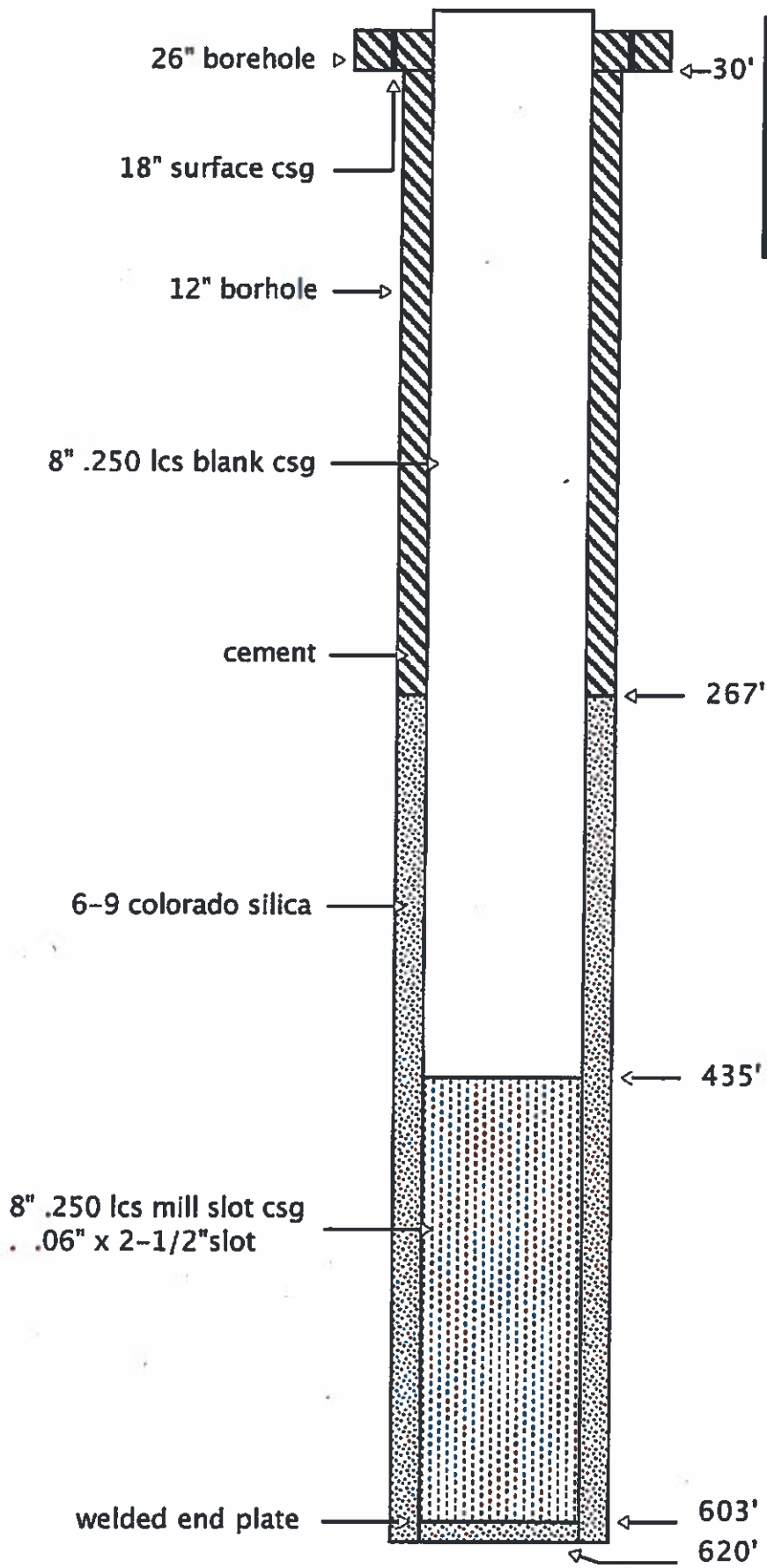
Name STEWART BROTHERS DRILLING CO.

License No. 787

Signature [Signature]  
(Licensed Well Driller)

Date 6-30-05

LISBON VALLEY MINING  
WELL # PW 6





# WELL DRILLER'S REPORT

State of Utah

Division of Water Rights

For additional space, use "Additional Well Data Form" and attach

**Well Identification**

Temporary Change Application: t30128 (05-2593)

WIN: 34211

**Owner**

*Note any changes*

Lisbon Valley Mining Co LLC  
1776 Lincoln Street Suite 900  
Denver CO 80203

Contact Person/Engineer: Chuck Bauer

**Well Location**

*Note any changes*

S 149 E 2066 from the NW corner of section 06, Township 31S, Range 26E, SL B&M

Location Description: (address, proximity to buildings, landmarks, ground elevation, local well #)

**Drillers Activity**

Start Date: 6-10-05

Completion Date: 6-22-05

Check all that apply:  New  Repair  Deepen  Clean  Replace  Public Nature of Use: Industrial

If a replacement well, provide location of new well. \_\_\_\_\_ feet north/south and \_\_\_\_\_ feet east/west of the existing well.

DEPTH (feet) FROM TO		BOREHOLE DIAMETER (in)	DRILLING METHOD	DRILLING FLUID
0	30	26"	Auger	dry
30	666	16"	Reverse Flood	mud
666	1518	9 7/8"	Air mist	air

Well Log		WATER	PERMEABILITY	UNCONSOLIDATED						CONSOLIDATED		DESCRIPTION AND REMARKS (e.g., relative %, grain size, sorting, angularity, bedding, grain composition density, plasticity, shape, cementation, consistency, water bearing, order, fracturing, mineralogy, texture, degree of weathering, hardness, water quality, etc.)
DEPTH (feet) FROM TO	High			Low	CLAY	SAND	GRAVEL	COBBLES	ROUNDER	OTHER	ROCK TYPE	
0	20			X							red	
20	40			X							grn.	
40	70									sandstone	Tan	
70	90									coal-shale	blk.	
90	120									sandstone	gry.	
120	190									shale	gry.	
190	205			X							grn.	
205	290									mudstone	gry.	
290	1040									shale-mudst	red-grn.	
1040	1100									mudstone	red	

**Static Water Level**

Date 6-15005 Water Level 586 feet Flowing?  Yes  No

Method of Water Level Measurement electric sounder If Flowing, Capped Pressure \_\_\_\_\_ PSI

Point to Which Water Level Measurement was Referenced ground level Elevation 6570

Height of Water Level reference point above ground surface 0 feet Temperature 64 degrees  C  F



**Construction Information**

DEPTH (feet)		CASING			DEPTH (feet)		<input type="checkbox"/> SCREEN <input type="checkbox"/> PERFORATIONS <input type="checkbox"/> OPEN BOTTOM		
FROM	TO	CASING TYPE AND MATERIAL/GRADE	WALL THICK (in)	NOMINAL DIAM. (in)	FROM	TO	SCREEN SLOT SIZE OR PERF SIZE (in)	SCREEN DIAM. OR PERF LENGTH (in)	SCREEN TYPE OR NUMBER PERF (per round/interval)
0	30	LCS grade B	.375	18"	424	664		.062x2-1/2	24/ft
+1.5'	424	LCS grade B	.250	10"					
643	756	LCS GRADE B	.372	7"	756	1488		.052x2-1/2	16/ft
1488	1508	LCS grade B	.372	7"					

Well Head Configuration: 10" casing 2' abv.gnd. with locking cap Access Port Provided?  Yes  No

Casing Joint Type: 10" welded, 7" t&c api 8rnd Perforator Used: mill slot

Was a Surface Seal Installed?  Yes  No Depth of Surface Seal: 179 feet Drive Shoe?  Yes  No

Surface Seal Material Placement Method: Tremie

Was a temporary surface casing used?  Yes  No If yes, depth of casing: \_\_\_\_\_ feet diameter: \_\_\_\_\_ inches

DEPTH (feet)		SURFACE SEAL / INTERVAL SEAL / FILTER PACK / PACKER INFORMATION		
FROM	TO	SEAL MATERIAL, FILTER PACK and PACKER TYPE and DESCRIPTION	Quantity of Material Used (if applicable)	GROUT DENSITY (lbs./gal., # bag mix, gal./sack etc.)
0	179	NEAT cement	220 cub.ft	15ppg
179	666	8-12 colorado silica	385 cub.ft	
666	1508	no annular material		

**Well Development and Well Yield Test Information**

DATE	METHOD	YIELD	Units Check One		DRAWDOWN (ft)	TIME PUMPED (hrs & min)
			GPM	CFS		
6-16-05	airlift	200gpm	x			8hrs
6-18-05	submersible pump	160	x			24hrs

**Pump (Permanent)**

Pump Description: \_\_\_\_\_ Horsepower: \_\_\_\_\_ Pump Intake Depth: \_\_\_\_\_ feet

Approximate Maximum Pumping Rate: \_\_\_\_\_ Well Disinfected upon Completion?  Yes  No

**Comments**

Description of construction activity, additional materials used, problems encountered, extraordinary Circumstances, abandonment procedures. Use additional well data form for more space.

**Well Driller Statement**

This well was drilled and constructed under my supervision, according to applicable rules and regulations, and this report is complete and correct to the best of my knowledge and belief.

Name STEWART BROTHERS DRILLING CO.

License No. 787

Signature [Signature]

Date 6-30-05

