

LEGEND

- REBAR & ALUMINUM CAP PER RECORD OF SURVEY FILE 80 PG 22 AND FILE 142 PG 66
- ◇ SECTION CORNER AS DESCRIBED
- ◆ 1/16 CORNER MONUMENTED OR REFERENCED WITH REBAR & ALUMINUM CAP PER SURVEY FILE 80 PG 22 AND FILE 142 PG 66
- SECTION LINE
- - - QUARTER SECTION LINE
- - - 1/16 SECTION LINE
- ▬▬▬ PLACE OF USE WITHIN THE MOAPA VALLEY NATIONAL WILDLIFE REFUGE

SURVEYOR'S NOTES

1. THE BOUNDARIES OF MOAPA VALLEY NWR WERE SURVEYED BY PLS 9390 UNDER CONTRACT WITH THE U.S. FISH & WILDLIFE SERVICE IN 2004, WHICH SURVEY IS DOCUMENTED BY RECORD OF SURVEY FILE 142 PAGE 66. THIS SURVEY IS TIED TO MONUMENTS OF THAT SURVEY, AND THE TIES FROM THE POINTS OF DIVERSION TO THE REFERENCE CORNERS SHOWN HEREON ARE DERIVED BY CALCULATION.
2. THE LOCATION OF THE OUTFLOW CHANNEL NORTH OF THE SOUTH RIGHT OF WAY OF WARM SPRINGS ROAD (SHEET 2) IS APPROXIMATE, BEING DERIVED FROM AERIAL MAPPING SHOWN ON SURVEY FILE 80 PAGE 22.
3. WIDTHS OF SPRING OUTFLOW CHANNELS SHOWN HEREON ARE APPROXIMATE
4. BASIS OF BEARING: SURVEY-GRADE GPS (ACCURACY < 1 METER) NEVADA EAST ZONE NAD83(99) PER THE COORDINATES LISTED ON FILE 142 PAGE 66. CONVERGENCE = + 0'31", COMBINED FACTOR = 0.99989229

STATE OF OREGON }
 COUNTY OF MULTNOMAH } SS

I, David Hills, being first duly sworn, depose and say that this map, consisting of 3 sheets, numbered from 1 to 3, inclusive, has been correctly drawn to the designated scale from field notes of a survey made by me on February 21, 2008; that it truly and correctly represents the location of the springs and their outflow channels, which are proposed to be appropriated by the U.S. Fish & Wildlife Service for fish & wildlife purposes; and that the proposed points of diversion and places of use are correctly shown.

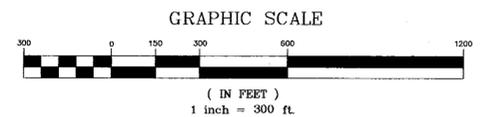
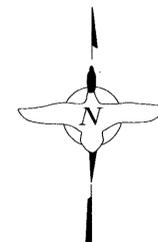
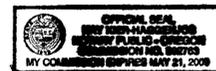
David Hills

State Water Right Surveyor 1183 (Federal Work Only)

Subscribed and sworn to before me this 01th day of OCTOBER, 2008

Kay Kin-Haggrenjos

Notary Public in and for Multnomah County, Oregon
 My commission expires May 21, 2009



SHEET 1 OF 3

STATE ENGINEER'S USE



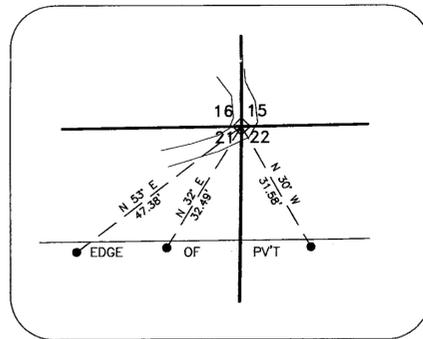
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 2008 NOV 11 AM 10:37
 STATE ENGINEERS OFFICE

MAP TO ACCOMPANY APPLICATION TO APPROPRIATE WATER FOR FISH & WILDLIFE (INSTREAM FLOW)

BY THE U.S. FISH & WILDLIFE SERVICE FROM "PLUMMER SPRINGS" and "APCAR SPRINGS" aka "PIPELINE JONES SPRING"

IN CLARK COUNTY, NEVADA

77509 77575



DETAIL NOT TO SCALE

TIES TO E 1/16 CORNER SEC 16 | SEC 21

SPRING #	BEARING	DISTANCE
1	N 74°52' W	1035'
2	N 74°37' W	1104'
3	N 72°33' W	1159'
4	N 74°19' W	1203'
5	N 73°53' W	1262'
6	N 76°46' W	1154'
7	N 77°33' W	1147'
8	N 75°44' W	944'
9	N 78°52' W	932'
10	N 79°01' W	923'
11	N 81°57' W	1082'

SECTION CORNER FALLS IN STREAM. SEE
DETAIL FOR REFERENCE MONUMENTS PER FILE
80 PAGE 22

NOTE

THE PLACE OF USE IS THE SPRING POOLS AND OUTFLOW CHANNELS FROM THEIR SOURCE TO THE POINT OF INTERSECTION WITH THE BOUNDARY OF MOAPA VALLEY NATIONAL WILDLIFE REFUGE, IN THE NE 1/4 NE 1/4 SEC 21 T14S R65E MDM.

LEGEND

- REBAR & ALUMINUM CAP PER RECORD OF SURVEY FILE 80 PG 22 AND FILE 142 PG 66
- SPRING WITH DIRECTION OF FLOW (LARGER POOLS DRAWN TO SCALE)
- SECTION LINE
- BOUNDARY OF MOAPA VALLEY NATIONAL WILDLIFE REFUGE

NE 1/4 NE 1/4 S 21 T14S R 65 E MDM

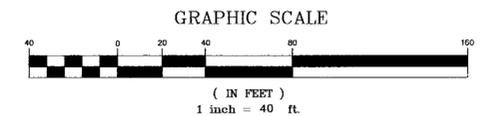
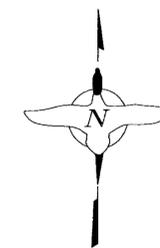
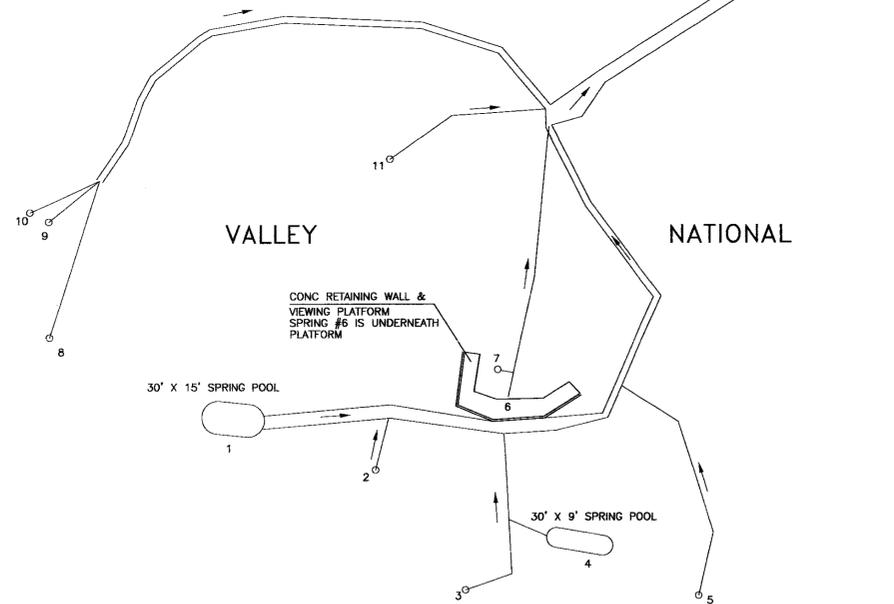
MOAPA

VALLEY

NATIONAL

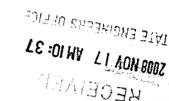
WILDLIFE

REFUGE



SHEET 2 OF 3

STATE ENGINEER'S USE



MAP TO ACCOMPANY APPLICATION TO APPROPRIATE WATER FOR FISH & WILDLIFE (INSTREAM FLOW)

BY THE U.S. FISH & WILDLIFE SERVICE FROM "PLUMMER SPRINGS" and "APCAR SPRINGS" aka "PIPELINE JONES SPRING"

IN CLARK COUNTY, NEVADA

77509 77575

TIES TO E 1/16 CORNER SEC 16/ SEC 21

#	SPRING BEARING	DISTANCE
A	S 30°05' E	1623'
B	S 30°11' E	1617'
C	S 31°13' E	1587'
D	S 31°21' E	1581'
1	S 29°15' E	1606'
2	S 27°59' E	1601'
3	S 27°43' E	1597'
4	S 27°20' E	1606'
5	S 27°09' E	1623'
6	S 22°40' E	1789'
7	S 23°44' E	1700'
8	S 24°13' E	1704'
9	S 24°30' E	1676'
10	S 23°58' E	1668'

SOURCE DESCRIPTIONS

"A" FLOW COMES OUT OF GRAVEL, NO OVERFLOW PIPE VISIBLE

"B" 4" BITUMEN-COATED PIPE, OVERFLOW FROM WATER DISTRICT PUMPING PLANT

"C" 12" PLASTIC OVERFLOW PIPE FROM WATER DISTRICT PUMPING PLANT.

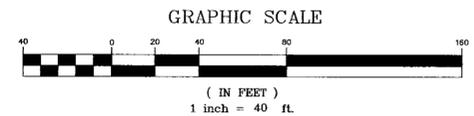
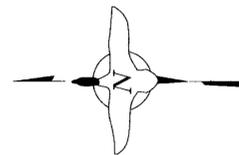
"D" BROKEN CERAMIC PIPE DIRECTLY UNDERNEATH 5" PLASTIC PIPE (NO FLOW IN PLASTIC PIPE)

NOTE

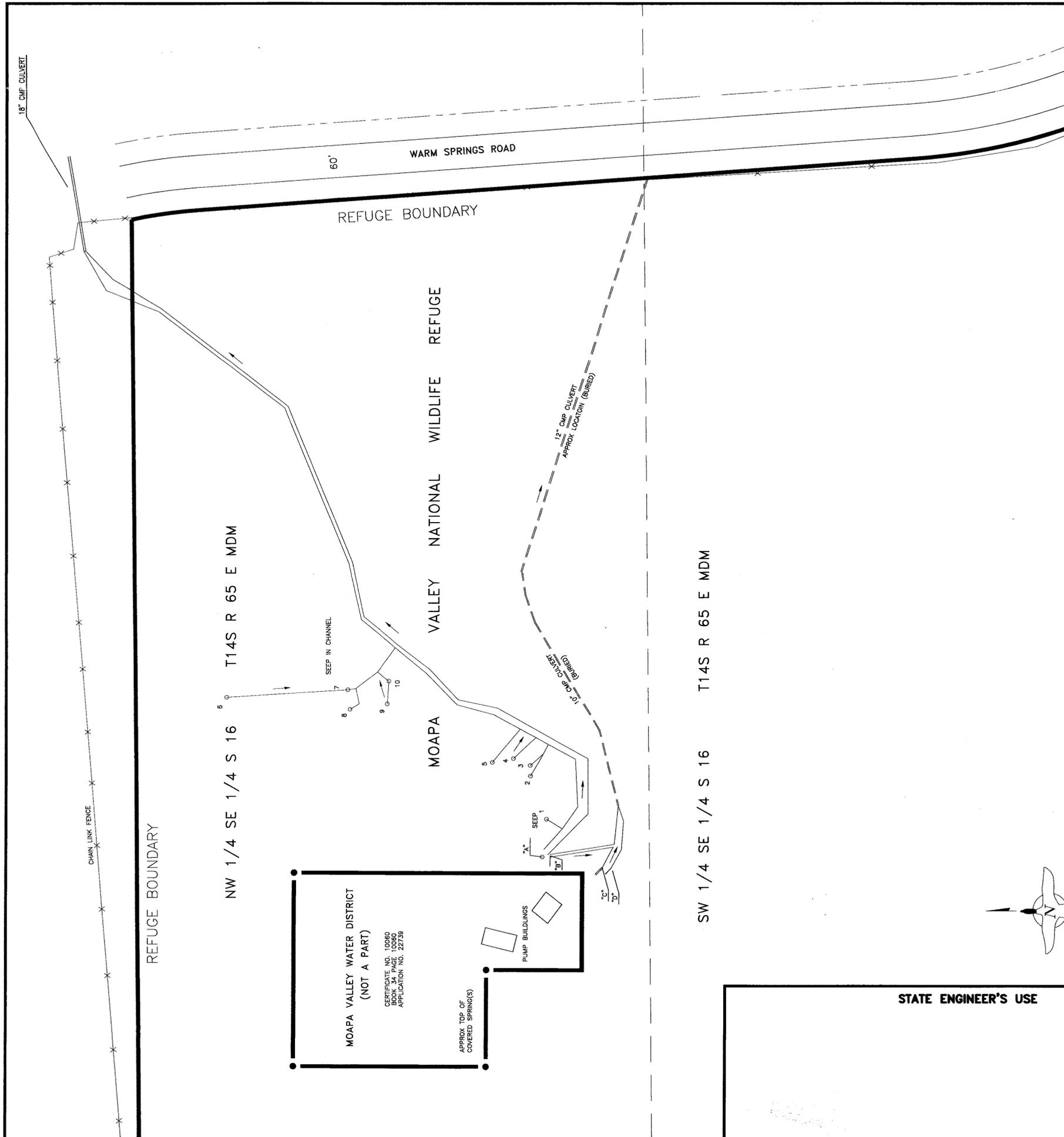
THE PLACE OF USE IS THE SPRING OUTFLOW CHANNELS FROM THEIR SOURCE TO THE POINT(S) OF INTERSECTION WITH THE BOUNDARY OF MOAPA VALLEY NATIONAL WILDLIFE REFUGE, IN THE NW 1/4 SE 1/4 AND SW 1/4 SE 1/4, SEC 16 T14S R65E MDM.

LEGEND

-  REBAR & CAP PER RECORD OF SURVEY FILE 142 PG 66
-  SPRING WITH DIRECTION OF FLOW (LARGER POOLS DRAWN TO SCALE)
-  SECTION LINE
-  QUARTER-QUARTER SECTION LINE
-  BOUNDARY OF MOAPA VALLEY NATIONAL WILDLIFE REFUGE



SHEET 3 OF 3



STATE ENGINEER'S USE

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MAP TO ACCOMPANY APPLICATION TO APPROPRIATE WATER FOR FISH & WILDLIFE (INSTREAM FLOW)
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