



March 30, 1999

Mr. Barry Hunt
Bureau of Land Management
Carlsbad Resource Area
620 East Greene Street
Carlsbad, New Mexico 88220-6292

RE: Navajo Refining Company Proposed WDW-2, Eddy County, New Mexico
Request for On-Site Inspection of Wellsite
Subsurface Project No. 60A4937

Dear Mr. Hunt:

Navajo Refining Company (Navajo) is purchasing an existing well in Eddy County, New Mexico for planned use as a Class I nonhazardous effluent disposal well, and plans to reenter and test the well in the next few months. The well is on federal land. Subsurface Technology, Inc. (Subsurface), formerly Envirocorp Services & Technology, Inc., on behalf of Navajo, requests your participation in an on-site inspection of the wellsite as soon as possible.

Pertinent information about the existing well is provided below:

Lease Number:	NM 6852
Current Operator:	The Eastland Oil Company (September 1990 to present)
Lease:	Chukka Federal No. 2
Former Operator:	Fred Pool Drilling Company (August 1985 to September 1990)
Former Operator:	Amoco Production Company (July 1973 to August 1985)
Former Lease:	Diamond Federal Gas Com. No. 1
Location:	1980' FNL, 660' FWL (SW/4 NW/4, Unit Letter E) 12-T18S-R27E

Topographic Map (Attachment A)

Original Total Depth: 10,372 feet
Plugged-Back Total Depth: 1912 feet
Well Schematic (Attachment B)

Status: The well is producing from the Penrose from perforations between 1446 feet and 1462 feet. Navajo is in Eddy County.



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negotiating to purchase the well from Eastland Oil Company. The purchase should be completed by April 1, 1999.

Navajo proposes to reenter the well, squeeze the perforations from 1446 feet to 1462 feet, drill out the plugs and clean out the well to approximately 9200 feet, set 5-1/2 inch casing at 9200 feet and cement it to the surface, and conduct one or more injectivity tests. The proposed injection intervals are porous zones in the lower portion of the Wolfcamp Formation (7270 feet to 7645 feet), the Cisco Formation (7645 feet to 8390 feet), and the Canyon Formation (8390 feet to 8894 feet). Navajo's proposed reentry, testing, and recompletion procedure is included as Attachment C. A schematic of the well after recompletion is included as Attachment D.

Subsurface is currently preparing a discharge plan application for the Class I well for Navajo to submit to the New Mexico Oil Conservation Division and the BLM Roswell office near the end of April 1999. Subsurface is also preparing BLM Form 3160-3 (Application for Permit to Drill) for Navajo to submit to the BLM Roswell office.

Please contact me at (713) 880-4640 to schedule an on-site inspection of the wellsite. Do not hesitate to call me if you need additional information or if you have questions.

Sincerely,

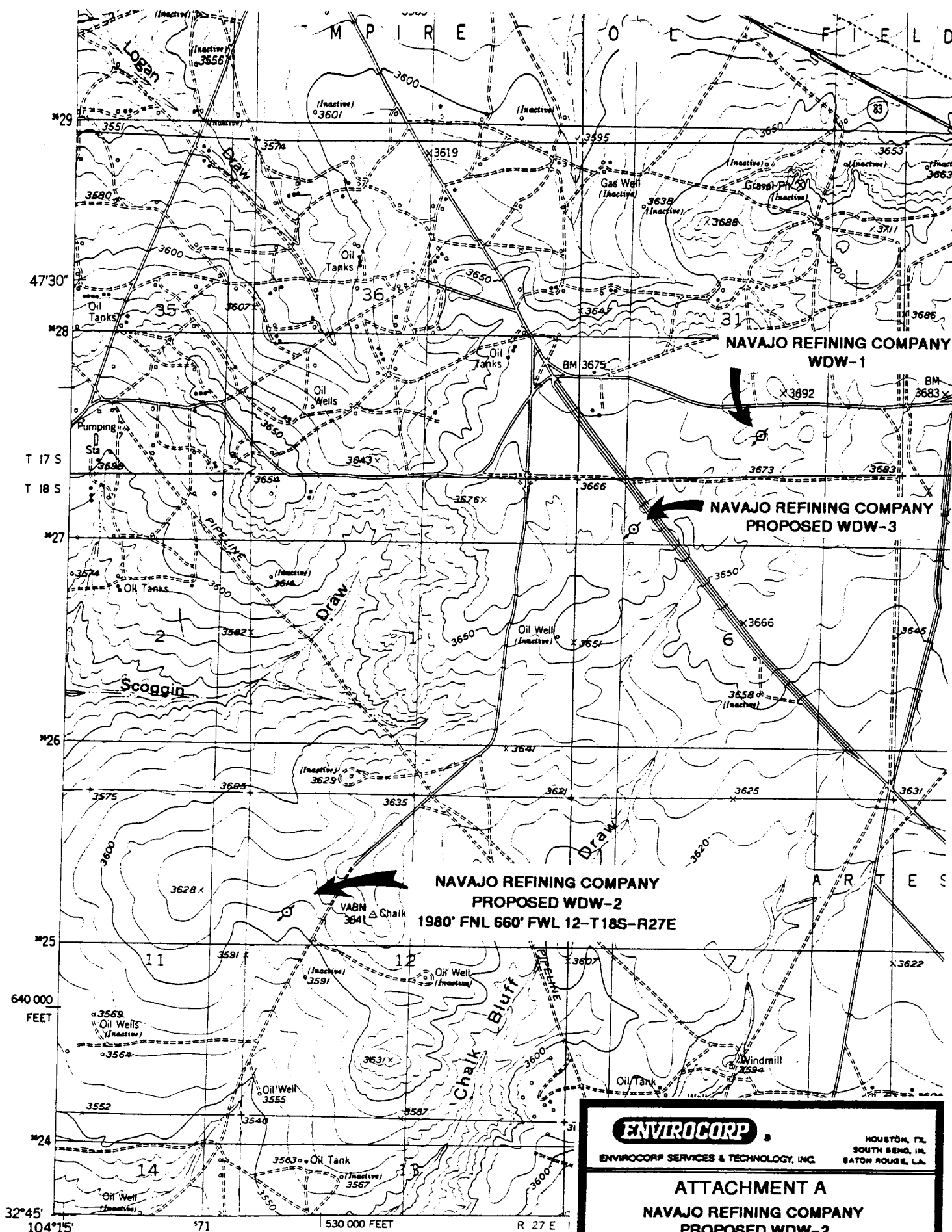


Nancy L. Niemann
Senior Geologist

NLN/paf
Attachments

c: Joe Lara – BLM, Carlsbad
David Glass – BLM, Roswell
Wayne Price – OCD, Santa Fe
Tim Gum – OCD, Artesia
Phil Youngblood – Navajo
Darrell Moore – Navajo
George Walbert – Holly Petroleum, Inc.

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ENVIROCORP SERVICES & TECHNOLOGY, INC.

HOUSTON, TX
SOUTH BEND, IN
BATON ROUGE, LA

ATTACHMENT A

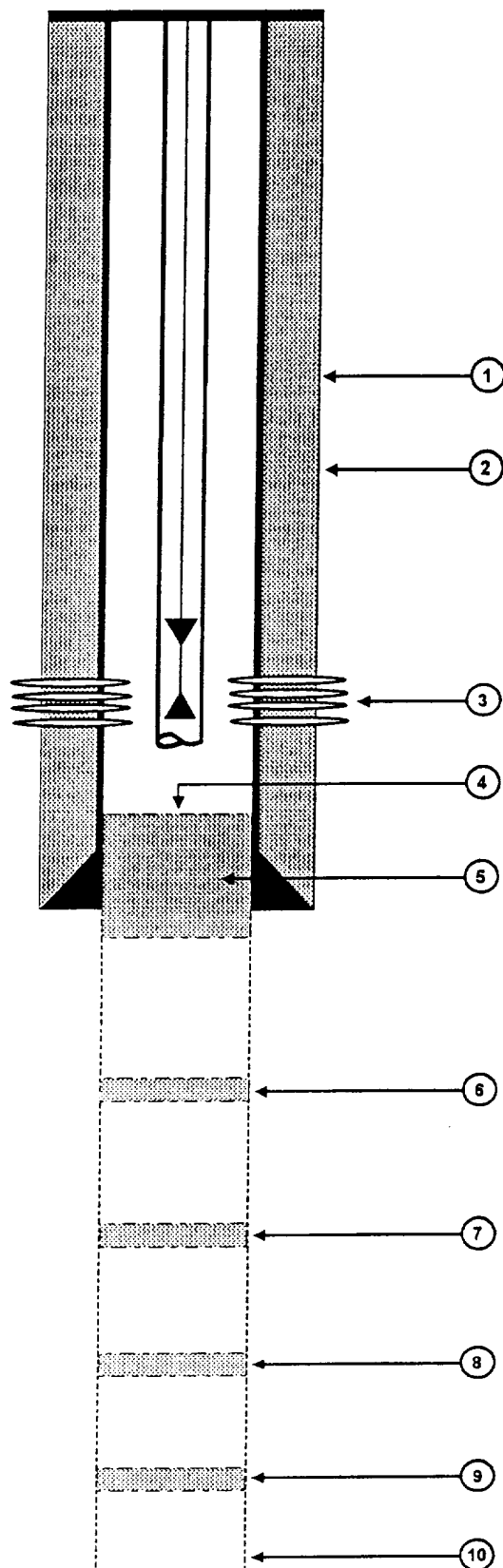
**NAVAJO REFINING COMPANY
PROPOSED WDW-2**

**1980' FNL 660' FWL 12-T18S-R27E
EDDY COUNTY, NM**

DATE:	CHECKED BY:	JOB NO:
DRAWN BY:	APPROVED BY:	DWG. NO:

BELOW GROUND DETAIL

All depths are referenced to the kelly bushing elevation of 13 feet. The surface elevation is 3610 feet.



Total Depth: 10,372'

1. Base of the USDW at 473'.

2. Casing: 8-5/8", 32 lb/ft, set at 1955' in an 11" hole. Cemented to surface with 700 sacks of cement.

3. Perforations: 1446' - 1462'.

4. PBTD: 1912'.

5. Cement Plug: 40 sacks from 1912' to 2045'.

6. Cement Plug: 50 sacks from 3620' to 3720'.

7. Cement Plug: 40 sacks from 5456' to 5556'.

8. Cement Plug: 50 sacks from 7435' to 7535'.

9. Cement Plug: 45 sacks from 9675' to 9775'.

10. Hole Size: 7-7/8".

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ATTACHMENT III-2
NAVAJO REFINING COMPANY
CURRENT WELL CONFIGURATION
CHUKKA FEDERAL No. 2

Date: 03/10/99	Checked By: NLN	Job No.: 60A4937
Drawn By: LKM	Approved By: NLN	File: WDW2A.DS4

ATTACHMENT C

DRILLING AND RECOMPLETION PROCEDURE FOR NAVAJO REFINING COMPANY'S PROPOSED WDW-2

1. Obtain all permits and approvals for the reentry, testing and completion of a currently existing well.
2. Move in and rig up a workover unit. Remove the pumping equipment and pull the tubing out of the well.
3. Go in the hole with a squeeze packer and squeeze the perforations from 1446 feet to 1462 feet with 100 sacks of Class "H" cement. Allow the cement to cure.
4. Drill out the cement, circulate the well clean and pressure test the squeezed perforations at 500 psig for 30 minutes. Pull the squeeze tools out of the hole.
5. Conduct a CBL/VDL survey from 1912 feet to the surface. Submit the results of the pressure test and CBL/VDL survey to the OCD and the BLM for their review and approval prior to mobilizing the drilling rig.
6. After receiving approval from the OCD and the BLM to continue the reentry, prepare the location for the selected drilling rig. Construct the lined reserve pits, dig out the cellar, and install a mousehole and rathole.
7. Move in and rig up the rotary drilling rig and install the blowout preventers.
8. Drill out the following cement plugs and conduct deviation surveys every 1000 feet or on trips:
 - a. 1912 feet to 2045 feet, 40 sacks
 - b. 3620 feet to 3720 feet, 50 sacks
 - c. 5456 feet to 5556 feet, 40 sacks
 - d. 7435 feet to 7535 feet, 50 sacks
9. Clean the well out to a depth of 9200 feet and circulate and condition the hole for logging. Make a wiper trip to the base of the 8-5/8 inch surface casing while strapping the drillpipe.
10. Conduct a formation microimager (FMI) survey with gamma ray from the well's total depth to 4000 feet. Continue the four-arm caliper survey to the 8-5/8 inch

ATTACHMENT C (Continued)

casing shoe. Process the FMI for fracture identification over the lower 200 feet of the confining zone and zones of interest in the injection zone, if warranted.

11. Spot a gelled pill at 9200 feet and lay down the drillpipe.
12. Run the 5-1/2 inch casing with a packoff shoe and float collar to 9200 feet. Install a "DV" tool at 5500 feet. Run centralizers at approximately 120-foot intervals.
13. Cement the 5-1/2 inch casing in place. Use a minimum of 20% excess cement as calculated from the caliper log. Circulate cement to the surface and allow to cure.
14. Clean out the mud pits and release the drilling rig 12 hours after cementing the 5-1/2 inch casing in place.
15. Stabilize the 5-1/2 inch casing at the surface using ready-mix cement.
16. Move in and rig up the completion rig pump, tank, power swivel, and work string. Install the blowout preventer.
17. Run in the well with a 4-3/4 inch bit to the "DV" tool and test the casing to 1500 psig for 30 minutes.
18. Drill out the "DV" tool and clean out the wellbore to the float collar. Test the casing to 1500 psig for 30 minutes. Circulate the wellbore with clean brine, preceded by 15% HCL to clean the casing. Trip the work string out of the well.
19. Conduct the casing inspection, CBL/VDL, and differential temperature surveys.
20. Perforate the selected injection interval as determined from the open hole logs. (Zone 1).
21. Run in the well with a packer and tailpipe. Set the packer above the top perforation and swab test the perforated interval. Recover at minimum two tubing volumes of the reservoir fluid for analysis (Note: Set up H₂S monitoring equipment prior to swabbing operations).
22. Acidize the zone using diverters. Pull the packer out of the well.
23. Perforate the next selected injection interval as determined from the open hole logs (Zone 2).

ATTACHMENT C (Continued)

24. Run a retrievable bridge plug and packer into the well and isolate Zone 2.
25. Acidize Zone 2 using diverters. Pull the retrievable bridge plug and packer out of the well, laying down the work string.
26. Conduct an injection test down the 5-1/2 inch casing at 420 gpm for 12 hours followed by a pressure falloff test.
27. Conduct a differential temperature survey and radioactive tracer survey to determine the injection profile.
28. Run the injection tubing and packer. Fill the annulus with corrosion inhibited brine.
29. Wait for the well system to come to thermal stabilization (approximately 24 hours).
30. Conduct an annulus pressure test witnessed by the OCD.
31. Rig down and move out all equipment and close the reserve pit.
32. Install the annulus monitoring system and return the well to the client.

BELOW GROUND DETAIL

All depths are referenced to the kelly bushing elevation of 13 feet. Surface elevation is 3610 feet.

1. Base of the USDW at 473'.

2. Casing: 8-5/8", 32 lb/ft, set at 1955' in an 11" hole. Cemented to surface with 700 sacks of cement.

3. Injection Tubing: 3-1/2".

4. DV Tool: at 5500'.

5. Annulus Fluid: Corrosion inhibited brine water.

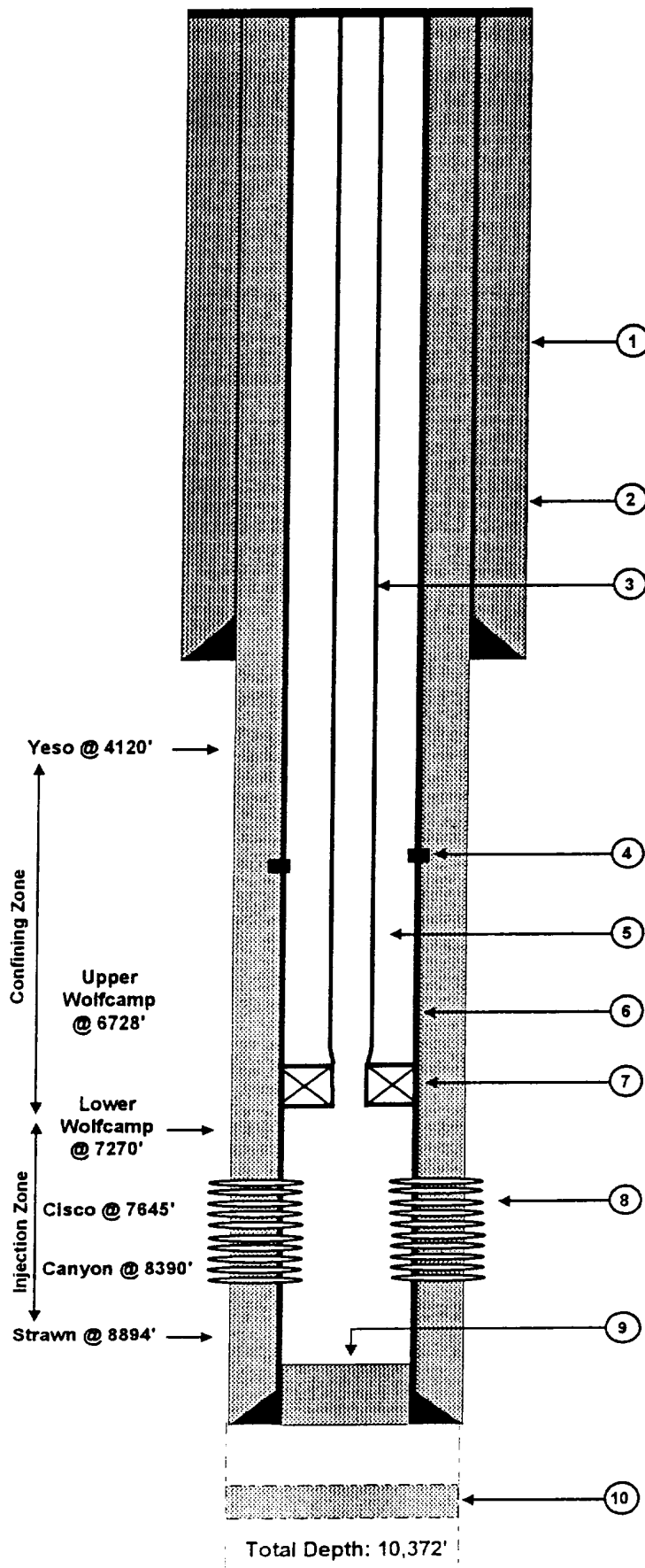
6. Protection Casing: 5-1/2" set in a 7-7/8" hole. Casing cemented to surface. Calipered hole volume plus 20% excess.

7. Packer: Fullbore retrievable packer set 100' above the top perforated injection interval.

8. Perforations:
Perforated in two intervals between 7270' and 8894'.

9. PBTD: 9200'

10. Cement Plug: 45 sacks from 9675' to 9775'.



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HOUSTON, TX.
SOUTH BEND, IN.
BATON ROUGE, LA.

ATTACHMENT III-4
NAVAJO REFINING COMPANY
PROPOSED WDW-2
ARTESIA, NEW MEXICO

Date: 03/11/99	Checked By: NLN	Job No.: 60A4937
Drawn By: LKM	Approved By: NLN	File: WDW2B.DS4