

Submit 1 Copy To Appropriate District Office
 District I - (575) 393-6161
 1625 N. French Dr., Hobbs, NM 88240
 District II - (575) 748-1283
 811 S. First St., Artesia, NM 88210
 District III - (505) 334-6178
 1000 Rio Brazos Rd., Aztec, NM 87410
 District IV - (505) 476-3460
 1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
 Energy, Minerals and Natural Resources

Form C-103
 Revised July 18, 2013

OIL CONSERVATION DIVISION
 1220 South St. Francis Dr.
 Santa Fe, NM 87505

WELL API NO. 30-015-26870
5. Indicate Type of Lease STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>
6. State Oil & Gas Lease No. 23711
7. Lease Name or Unit Agreement Name WILLOW LAKE 22
8. Well Number #002
9. OGRID Number 372098
10. Pool name or Wildcat MALAGA; EAST (DELAWARE)

SUNDRY NOTICES AND REPORTS ON WELLS
 (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

1. Type of Well: Oil Well Gas Well Other

2. Name of Operator
Marathon Oil Permian LLC

3. Address of Operator
5555 San Felipe St., Houston, TX 77056

4. Well Location
 Unit Letter B : 990 feet from the N line and 1980 feet from the E line
 Section 22 Township 24S Range 28E NMPM County EDDY

11. Elevation (Show whether DR, RKB, RT, GR, etc.)
3006' GR

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK <input type="checkbox"/>	PLUG AND ABANDON <input checked="" type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>	P AND A <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	MULTIPLE COMPL <input type="checkbox"/>	CASING/CEMENT JOB <input type="checkbox"/>	
DOWNHOLE COMMINGLE <input type="checkbox"/>			
CLOSED-LOOP SYSTEM <input type="checkbox"/>			
OTHER: <input type="checkbox"/>		OTHER: <input type="checkbox"/>	

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

- 1. Set 6" CIBP @ 4725'
- 2. 35 sxs of Class C CMT on top of CIBP; WOC and Tag same
- 3. 25 sxs of Class C CMT @ 4,150'; WOC and Tag same
- 4. P&S 50 sxs of Class C CMT @ 2,625'; WOC and Tag same
- 5. P&S 50 sxs of Class C CMT @ 499'; WOC and Tag same
- 6. P&S 35 sxs of Class C CMT 100' - SFC; Verify Visually
- 7. Install DHM

25 sxs Cement on CIBP @ 4970' - WOC & Tag
 Notify OCD 24 hrs. prior to any work done.

RECEIVED

AUG 05 2019

P&A FLUID BETWEEN ALL PLUGS
 CLOSED LOOP ALL FLUIDS TO LICENSED FACILITY

DISTRICT II-ARTESIA O.C.D.

Spud Date: Rig Release Date:

** See Attached COA's must be plugged by 8/7/20*

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE JOSHUA GARRETT GERVAIS Digitally signed by JOSHUA GARRETT GERVAIS Date: 2019.08.01 16:00:19 -0500' TITLE P&A ENGINEER DATE 8/1/19

Type or print name JOSHUA GARRETT GERVAIS E-mail address: JOSHUAGERVAI@MARATHON PHONE: (281)221-7712

For State Use Only

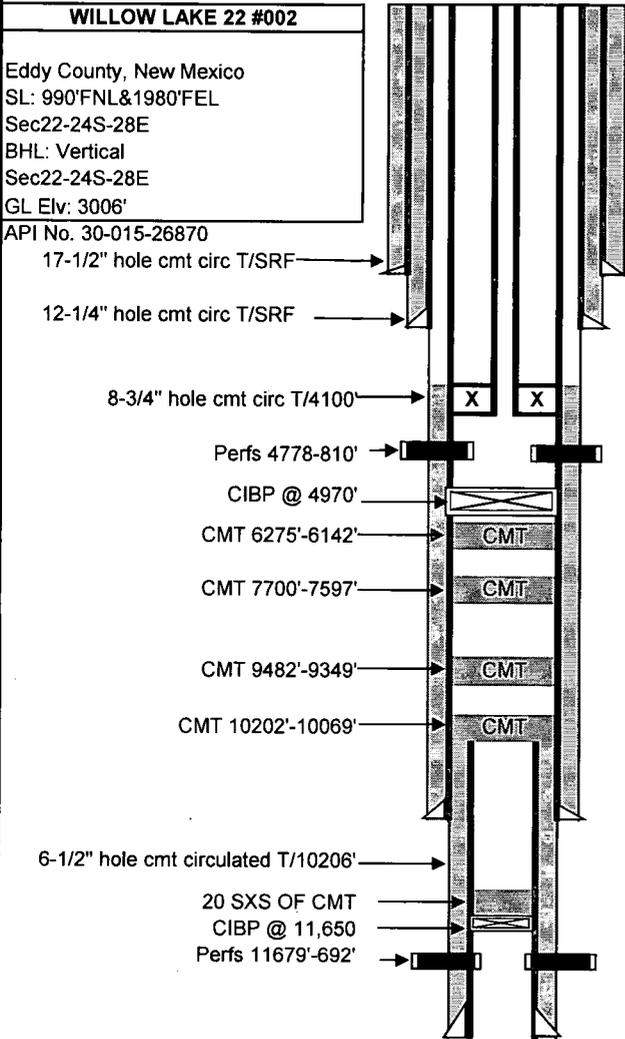
APPROVED BY: [Signature] TITLE Staff mg. DATE 8/7/19

Conditions of Approval (if any):

WILLOW LAKE 22 #002 - WBD - MRO

Marathon Oil Corporation

VERTICAL WELLBORE DIAGRAM



Casing					
Size	No Jts	Wt	Grade/Thrds	Depth Set (MD)	CMT TOP
13-3/8"		48	H-40	449	SFC
9-5/8"		36	H-80	2575	SFC
7"		29	P-110	10463	4100
4-1/2"		15.1	P-110	11822	10206

Other in Hole		
ITEM	TOP	BTM
CIBP/CMT	11650	11655
CMT	10069	10202
CMT	9349	9482
CMT	7567	7700
CMT	6142	6275
CIBP	4970	4975

Production Assembly			
Description	Length	Depth Set (MD)	Depth Set (TVD)
2-3/8" tbg	-	-	
Packer	-	#VALUE!	
2-3/8" tbg	-	#VALUE!	
		#VALUE!	
		#VALUE!	

Vertical Completion Description

Perforation 4778' - 4810'
 Perforation 11,679' - 11,692'

WILLOW LAKE 22 #002 - WBD - MRO

Marathon Oil Corporation

VERTICAL WELLBORE DIAGRAM

WILLOW LAKE 22 #002

Eddy County, New Mexico
 SL: 990'FNL&1980'FEL
 Sec22-24S-28E
 BHL: Vertical
 Sec22-24S-28E
 GL Elev: 3006'
 API No. 30-015-26870

17-1/2" hole cmt circ T/SRF

12-1/4" hole cmt circ T/SRF

8-3/4" hole cmt circ T/4100'

Perfs 4778-810'

CIBP @ 4970'

CMT 6275'-6142'

CMT 7700'-7597'

CMT 9482'-9349'

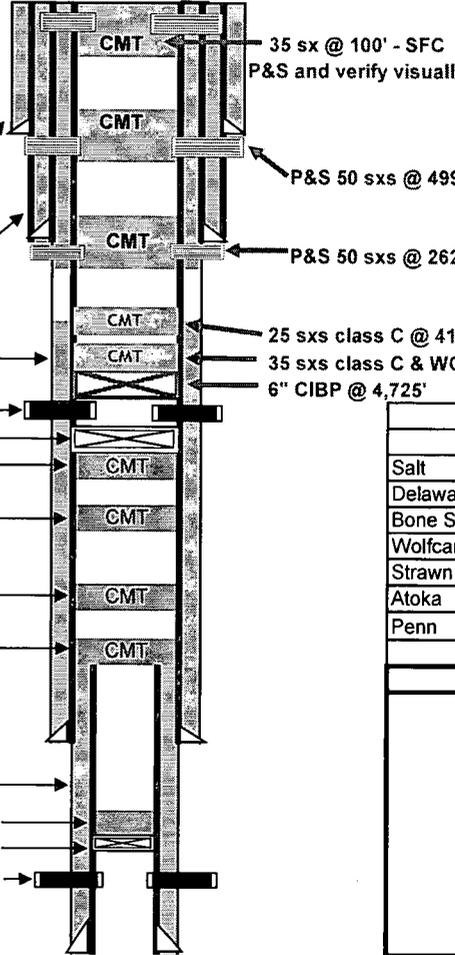
CMT 10202'-10069'

6-1/2" hole cmt circulated T/10206'

20 SXS OF CMT

CIBP @ 11,650

Perfs 11679'-692'



Casing				
Size	Wt	Grade/Thrds	Depth (MD)	CMT TOP
13-3/8"	48	H-40	449	SFC
9-5/8"	36	H-80	2575	SFC
7"	29	P-110	10463	4100
4-1/2"	15.1	P-110	11822	10206

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CMT	7567	7700
CMT	6142	6275
CIBP	4970	4975

Formation Tops			
Description	Length	Top (MD)	Bottom (MD)
Salt		300'	2,390'
Delaware		2,390'	6,197'
Bone Springs		6,197'	9,432'
Wolfcamp		9,432'	11,232'
Strawn		11,232'	11,410'
Atoka		11,410'	11,500'
Penn		11,500'	NA

Vertical Completion Description			

CONDITIONS FOR PLUGGING AND ABANDONMENT

District II / Artesia N.M.

The following is a guide or checklist in preparation of a plugging program, this is not all inclusive and care must be exercised in establishing special plugging programs in unique and unusual cases, **Notify NMOCD District Office II at (575)-748-1283 at least 24 hours before beginning work.**

1. A notice of intent to plug and abandon a wellbore is required to be approved before plugging operations are conducted. A cement evaluation tool is required in order to ensure isolation of producing formations, protection of water and correlative rights. A cement bond log or other accepted cement evaluation tool is to be provided to the division for evaluation if one has not been previously run or if the well did not have cement circulated to surface during the original casing cementing job or subsequent cementing jobs.
2. Closed loop system is to be used for entire plugging operation. Upon completion, contents of steel pits are to be hauled to a permitted disposal location.
3. Trucking companies being used to haul oilfield waste fluids to a disposal – commercial or private – shall have an approved NMOCD C-133 permit. A copy of this permit shall be available in each truck used to haul waste products. It is the responsibility of the operator as well as the contractor, to verify that this permit is in place prior to performing work. Drivers shall be able to produce a copy upon request of an NMOCD Field inspector.
4. Filing a subsequent C-103 will serve as notification that the well has been plugged.
5. A final C-103 shall be filed (and a site inspection by NMOCD Inspector to determine if the location is satisfactorily cleaned, all equipment, electric poles and trash has been removed to Meet NMOCD standards) before bonding can be released.
6. If the well is not plugged within 1
7. If work has not begun within 1 Year of the approval of this procedure, an extension request must be file stating the reason the well has not been plugged.
8. **Squeeze pressures are not to exceed 500 psi, unless approval is given by NMOCD.**
9. Produced water **will not** be used during any part of the plugging operation.
10. Mud laden fluids must be placed between all cement plugs mixed at 25 sacks per 100 bbls of water.
11. All cement plugs will be a minimum of 100' in length or a minimum of 25 sacks of cement, whichever is greater. 50' of calculated cement excess required for inside casing plugs and 100% calculated cement excess required on outside casing plugs.
12. **Class 'C' cement will be used above 7500 feet.**
13. **Class 'H' cement will be used below 7500 feet.**
14. **A cement plug is required to be set 50' above and 50' below, casing stubs, DV tools, attempted casing cut offs, cement tops outside casing, salt sections and anywhere the casing is perforated, these plugs require a 4 hour WOC and then will be tagged**
15. **All Casing Shoes Will Be Perforated 50' below shoe depth and Attempted to be Squeezed, cement needs to be 50' above and 50' Below Casing Shoe inside the Production Casing**

16. When setting the top out cement plug in production, intermediate and surface casing, wellbores should remain full at least 30 minutes after plugs are set
17. **A CIBP is to be set within 100' of production perforations, capped with 100' of cement, WOC 4 hours and tag.**
18. A CIBP with 35' of cement may be used in lieu of the 100' plug if set with a bailer. This plug will be placed within 100' of the top perforation, **(WOC 4 hrs and tag).**
19. No more than **3000'** is allowed between cement plugs in cased hole and **2000'** in open hole.
20. Some of the Formations to be isolated with cement plugs are: These plugs to be set to isolate formation tops
 - A) Fusselman
 - B) Devonian
 - C) Morrow
 - D) Wolfcamp
 - E) Bone Springs
 - F) Delaware
 - G) Any salt sections
 - H) Abo
 - I) Glorieta
 - J) Yates.
 - K) **Potash---** (In the R-111-P Area (Potash Mine Area), a solid cement plug must be set across the salt section. Fluid used to mix the cement shall be saturated with the salts that are common to the section penetrated and in suitable proportions, not more than 3% calcium chloride (by weight of cement) will be considered the desired mixture whenever possible, **WOC 4 hours and tag, this plug will be 50' below the bottom and 50' above the top of the Formation.**
21. **If cement does not exist behind casing strings at recommended formation depths, the casing can be cut and pulled with plugs set at recommended depths. If casing is not pulled, perforations will be shot and cement squeezed behind casing, WOC and tagged. These plugs will be set 50' below formation bottom to 50' above formation top inside the casing**

DRY HOLE MARKER REQUIRMENTS

The operator shall mark the exact location of the plugged and abandoned well with a steel marker not less than four inches in diameter, 3' below ground level with a plate of at least ¼" welded to the top of the casing and the dry hole marker welded on the plate with the following information welded on the dry hole marker:

1. Operator name 2. Lease and Well Number 3.API Number 4. Unit Letter 5. Quarter Section (feet from the North, South, East or West) 6. Section, Township and Range 7. Plugging Date 8. County (SPECIAL CASES)-----AGRICULTURE OR PRARIE CHICKEN BREEDING AREAS

In these areas, a below ground marker is required with all pertinent information mentioned above on a plate, set 3' below ground level, a picture of the plate will be supplied to NMOCD for record, the exact location of the marker (longitude and latitude by GPS) will be provided to NMOCD (We typically require a current survey to verify the GPS)