

79

STATE OF NEW MEXICO  
ENERGY, MINERALS, AND NATURAL RESOURCES DEPARTMENT  
OIL CONSERVATION DIVISION

Donna P.  
NEEDA  
MARIE  
PAUL.

IN THE MATTER OF THE HEARING  
CALLED BY THE OIL CONSERVATION  
DIVISION FOR THE PURPOSE OF  
CONSIDERING:

Case No. 12378  
Order No. R-11367

APPLICATION OF TAMARACK PETROLEUM COMPANY, INC. FOR AN  
UNORTHODOX SUBSURFACE OIL AND GAS WELL LOCATION, LEA  
COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on April 20, 2000 at Santa Fe, New Mexico, before Examiner Mark W. Ashley.

NOW, on this 3<sup>rd</sup> day of May, 2000, the Division Director, having considered the testimony, the record and the recommendations of the Examiner,

FINDS THAT:

- (1) Due public notice has been given and the Division has jurisdiction of this cause and its subject matter.
- (2) The applicant, Tamarack Petroleum Company, Inc. ("Tamarack"), proposes to re-enter the plugged and abandoned Anadarko Petroleum Corporation Hood "8" Well No. 1 (API No. 30-025-30513), located 859 feet from the North line and 1981 feet from the East line (Unit B) of Section 8, Township 17 South, Range 38 East, NMPM, Lea County, New Mexico, and directionally drill to an approximate depth of 12,200 feet (TVD) at an unorthodox subsurface well location within 110 feet of a target point at the top of the Strawn formation that is 1179 feet from the North line and 2211 feet from the East line (Unit B) of Section 8. Further, the E/2 of Section 8 is to be dedicated to this well in order to form a standard 320-acre stand-up gas spacing and proration unit for any and all formations from the top of the Wolfcamp formation to the base of the Atoka formation developed on 320-acre spacing; and the NW/4 NE/4 of Section 8 is to be dedicated to this well in order to form a standard 40-acre oil spacing and proration unit for any and all formations from the top of the Wolfcamp formation to the base of the Atoka formation developed on 40-acre spacing.
- (3) Tamarack originally sought administrative approval of this location; however, following discussions with the Division, the application was set for hearing to require Tamarack to present additional evidence concerning the proposed well location.

(9) Approval of this application will afford the applicant the opportunity to produce its just and equitable share of oil and gas within the subject formations, will result in the recovery of hydrocarbons that would otherwise be left in the ground and wasted, and will otherwise prevent waste and protect correlative rights.

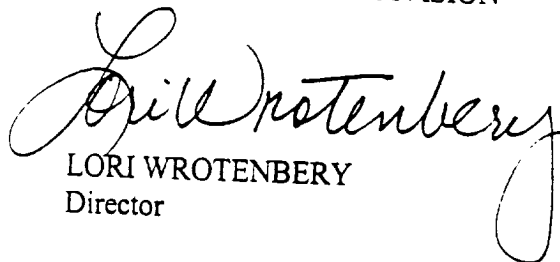
**IT IS THEREFORE ORDERED THAT:**

(1) The applicant, Tamarack Petroleum Company, Inc., is hereby authorized to re-enter the plugged and abandoned Anadarko Petroleum Corporation Hood "8" Well No. 1 (API No. 30-025-30513), located 859 feet from the North line and 1981 feet from the East line (Unit B) of Section 8, Township 17 South, Range 38 East, NMPM, Lea County, New Mexico, and directionally drill to an approximate depth of 12,200 feet (TVD) at an unorthodox subsurface well location within 110 feet of a target point at the top of the Strawn formation that is 1179 feet from the North line and 2211 feet from the East line (Unit B) of Section 8. Further, the E/2 of Section 8 is to be dedicated to this well in order to form a standard 320-acre stand-up gas spacing and proration unit for any and all formations from the top of the Wolfcamp formation to the base of the Atoka formation developed on 320-acre spacing; and the NW/4 NE/4 of Section 8 is to be dedicated to this well in order to form a standard 40-acre oil spacing and proration unit for any and all formations from the top of the Wolfcamp formation to the base of the Atoka formation developed on 40-acre spacing.

(2) Jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

  
LORI WROTENBERY  
Director

S E A L

(4) Approval of this application, in accordance with Division Rule 111.C(2), will require the Division to grant exceptions to Division Rules 104.B(1) and 104.C(2), as revised by Division Order R-11231, issued in Case No. 12119 and dated August 12, 1999.

(5) Tamarack testified that the subject well will be unorthodox towards the west line and south line of Unit B of Section 8, the ownership is uniform throughout the NE/4 of Section 8, and all unleased mineral owners and leased working interest owners in the W/2 of Section 8 have been properly notified of this application.

(6) No interested party appeared at the hearing in opposition to this application.

(7) Tamarack presented geological evidence demonstrating that:

- (a) the greatest opportunity for a successful Strawn oil well in the NE/4 of this section is created by locating the well at the highest point on the Strawn structure in order to be at a point of maximum reservoir thickness and maximum vertical distance from known water within this reservoir;
- (b) based on detailed 3-D seismic data validated by existing well control, the optimum well location in this spacing unit is at the proposed unorthodox well location which is anticipated to be within the highest structural contour of this reservoir and within the contour of greatest reservoir thickness;
- (c) any attempt to locate this well at a standard location will substantially increase the risk of drilling an unsuccessful well because that location would be down structure from the highest structural contour;
- (d) an opportunity exists at the proposed location to recover oil from the Strawn reservoir that might not be recovered if this well were drilled at the closest standard well location; and
- (e) there is the possibility that if this well is drilled an additional 600 feet below the base of the Strawn formation, it might encounter gas production in the Atoka formation.

(8) Tamarack further testified that:

- (a) the interest owners paying for this re-entry will realize a substantial economic savings by using this existing wellbore and directionally drilling it as proposed; and
- (b) the risks involved do not justify drilling to the Atoka formation unless this wellbore is used.

RECEIVED  
JUL 10 1999  
HARRIS CO. CLERK

District I  
PO Box 1980, Hobbs, NM 88241-1980  
District II  
811 South First, Artesia, NM 88210  
District III  
1000 Rio Brazos Rd., Aztec, NM 87410  
District IV  
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION  
2040 South Pacheco  
Santa Fe, NM 87505

Form C-101  
Revised October 18, 1994  
Instructions on back  
Submit to Appropriate District Office  
State Lease - 6 Copies  
Fee Lease - 5 Copies

☐ AMENDED REPORT

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

Operator Name and Address. Tamarack Petroleum Company, Inc. 500 W. Texas #1485 Midland, Texas 79701		OGRID Number 022131
		API Number 30-025-30513
Property Code 25436	Property Name Hood 8	Well No. 1

7 Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	8	17S	38E		859	North	1981	East	Lea

8 Proposed Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	8	17S	38E		1179	North	2211	East	Lea

Proposed Pool 1 Wildcat (Atoka)*	Proposed Pool 2 Wildcat (Strawn)*
-------------------------------------	--------------------------------------

Work Type Code E	Well Type Code O	Cable/Rotary R	Lease Type Code P	Ground Level Elevation 3713'
Multiple No	Proposed Depth 12,200	Formation Atoka	Contractor	Spud Date 04/01/00

21 Proposed Casing and Cement Program

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
17"	13.375	unknown	426	400	Surface
12.25"	8.625	unknown	4490	1700	Surface
7.875"	5.5	17#	12000	900	3500

Describe the proposed program. If this application is to DEEPEN or PLUG BACK give the data on the present productive zone and proposed new productive zone. Describe the blowout prevention program, if any. Use additional sheets if necessary.

Re-enter dry hole, drill out cement plugs and clean out to 4900'.

Kick-off at 4900' and drill new 7-7/8" hole to new bottom hole location.

If productive, run 5.5" casing and cement.

BOP's to be installed prior to drilling out plugs (as provided by drilling contractor)

\* In the event the Atoka is not productive, additional potential zones to plug back include the primary objective Strawn at approx. 11,150', Wolfcamp at approx. 10,000' and San Andres at approx. 5,500'. Tamarack requests permit approved for these formations as well as the Atoka.

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

Signature:

Printed name:

Title:

District Engineer

OIL CONSERVATION DIVISION

Approved by:

Title:

Approval Date:

Expiration Date:

R-11367

Permit Expires 1 Year From Approval  
Date Unless Drilling Underway

DISTRICT I  
P.O. Box 1900, Hobbs, NM 88241-1900

DISTRICT II  
P.O. Drawer DD, Artesia, NM 88211-0719

DISTRICT III  
1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV  
P.O. BOX 2088, SANTA FE, N.M. 87504-2088

State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-102  
Revised February 10, 1994  
Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

## OIL CONSERVATION DIVISION

P.O. Box 2088  
Santa Fe, New Mexico 87504-2088

☐ AMENDED REPORT

### WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-025-30513	Pool Code ✓	Pool Name Wildcat
Property Code 25436	Property Name HOOD 8	Well Number 1
OGRID No. 022131	Operator Name TAMARACK PETROLEUM CO., INC.	Elevation 3713

#### Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	8	17 S	38 E		859	NORTH	1981	EAST	LEA

#### Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	8	17 S	38 E		1179	NORTH	2211	EAST	LEA

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED  
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

<p>SURFACE SPC NMEZ NAD 1927 Y=676404 X=857819</p>		<p><b>OPERATOR CERTIFICATION</b></p> <p>I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.</p> <p>Signature Hal Gill</p> <p>Printed Name District Engineer</p> <p>Title 03/08/2000</p> <p>Date</p>
<p>BOTTOM HOLE &amp; PENETRATION POINT SPC NMEZ NAD 1927 Y=676081 X=857593</p>		<p><b>SURVEYOR CERTIFICATION</b></p> <p>I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.</p> <p>FEBRUARY 7, 2000</p> <p>Date Surveyed Signature &amp; Seal of Professional Surveyor Professional Surveyor NEW MEXICO 2/23/2000 00-11-0186 Certificate No. RONALD EIDSON 3239 CARY EIDSON 12641 PROFESSOR MACON McDONALD 12185</p>

# Tamarack Petroleum Company Inc.

Structure : Hood 8-1

Slot : slot #1

Field :

Location : LEA COUNTY, NEW MEXICO



Geographic North is 3.00 degrees East of 1983 North  
No correction shown for magnetic declination to 1983 and 1984

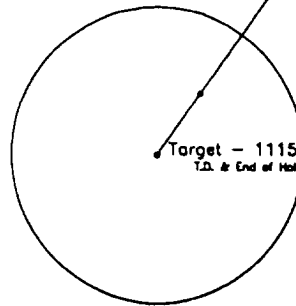
<- West (feet)

350 300 250 200 150 100 50 0 50

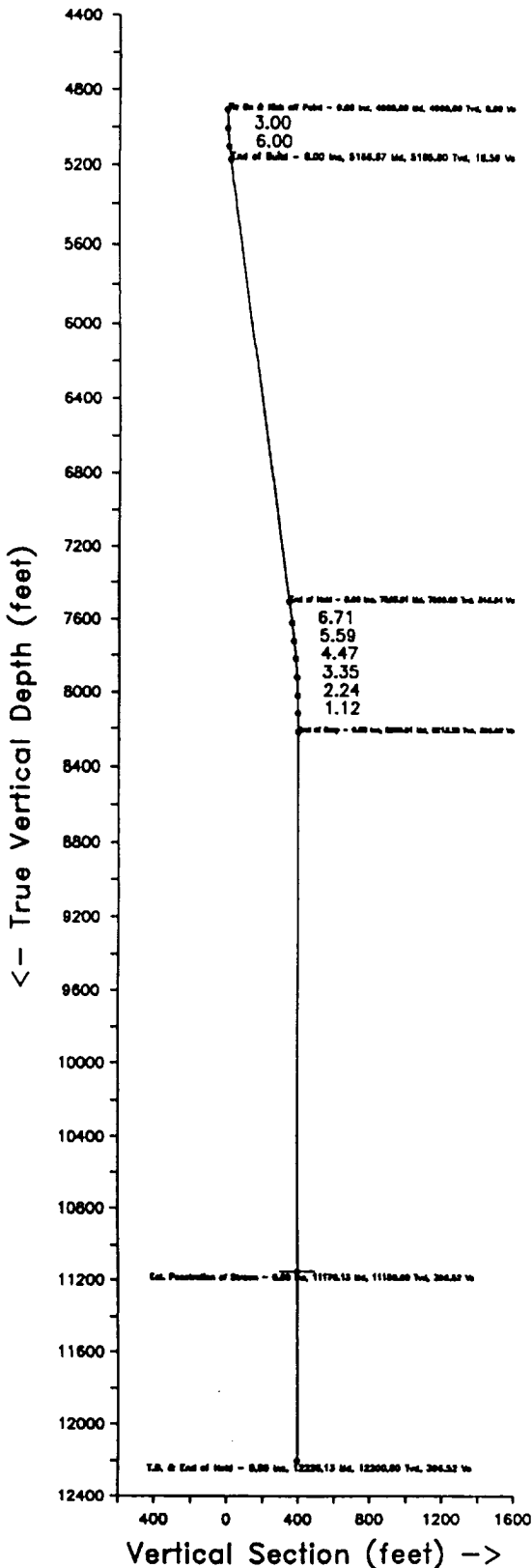
Surface Location  
859' FNL & 1981' FEL  
Sec 8, T17S, R38E  
Lea County, New Mexico

South (feet) ->

50  
0  
50  
100  
150  
200  
250  
300  
350  
400  
450  
500



Target - 11150.00 Tvd, 323.00 S, 230.00 W  
T.D. & End of Hole - 12200.00 Tvd, 323.00 S, 230.00 W



WELL PROFILE DATA								
Point	MD	In	Dir	TVD	North	East	V. Sect	Deg/100
KOP	4900.00	0.00	215.45	4900.00	0.00	0.00	0.00	0.00
End of Build	6166.87	8.00	215.46	6166.80	-16.14	-10.78	18.58	3.00
End of Hole	7623.81	8.00	215.46	7600.00	-282.37	-201.08	348.64	0.00
End of Drop	8239.81	0.00	215.46	8213.38	-323.00	-230.00	396.52	1.12
Target	11176.13	0.00	215.46	11180.00	-323.00	-230.00	396.52	0.00
T.D. & End of Hole	12228.13	0.00	215.46	12200.00	-323.00	-230.00	396.52	0.00

**BAKER  
HUGHES**

**INTEQ**

Created by bartw  
Date plotted : 7-Mar-2000  
Plot Reference is S Curve, 3 Deg BUR.  
Coordinates are in feet reference slot #1.  
True Vertical Depths are reference rotary table.  
--- Baker Hughes INTEQ ---

Azimuth 215.45 with reference 0.00 N, 0.00 E from slot #1

Tamarack Petroleum Company Inc.  
Hood 8-1

slot #1

LEA COUNTY, NEW MEXICO

P R O P O S A L L I S T I N G

by  
Baker Hughes INTEQ

Your ref : S Curve, 3 Deg BUR  
Our ref : prop2394  
License :

Date printed : 7-Mar-2000  
Date created : 2-Nov-1999  
Last revised : 7-Mar-2000

Field is centred on n32 58 13.100,w103 14 15.6  
Structure is centred on n32 58 13.100,w103 14 15.6

Slot location is n32 58 13.100,w103 14 15.600  
slot Grid coordinates are N 718458.262, E 836033.931  
Slot local coordinates are 0.00 N 0.00 E

Projection type: mercator - New Mexico East (3001), Spheroid: Clarke - 1866  
Reference North is True North

Tamarack Petroleum Company Inc.  
Hood 8-1, slot #1  
, LEA COUNTY, NEW MEXICO

PROPOSAL LISTING Page 1  
Your ref : S Curve, 3 Deg BUR  
Last revised : 7-Mar-2000

Measured Depth	Inclin. Degrees	Azimuth Degrees	True Vert Depth	R E C T A N G U L A R C O O R D I N A T E S	Dogleg Deg/100ft	Vert Sect
4900.00	0.00	215.45	4900.00	0.00 N	0.00	0.00
5000.00	3.00	215.45	4999.95	2.13 S	3.00	2.62
5100.00	6.00	215.45	5099.63	8.52 S	3.00	10.46
5166.67	8.00	215.45	5165.80	15.14 S	3.00	18.59
5500.00	8.00	215.45	5495.89	52.93 S	0.00	64.98
6000.00	8.00	215.45	5991.02	109.61 S	0.00	134.56
6500.00	8.00	215.45	6486.16	166.30 S	0.00	204.15
7000.00	8.00	215.45	6981.29	222.98 S	0.00	273.74
7500.00	8.00	215.45	7476.43	279.67 S	0.00	343.32
7523.81	8.00	215.45	7500.00	282.37 S	0.00	346.64
7539.51	7.82	215.45	7515.55	284.13 S	1.12	348.80
7639.51	6.71	215.45	7614.75	294.43 S	1.12	361.44
7739.51	5.59	215.45	7714.17	303.15 S	1.12	372.15
7839.51	4.47	215.45	7813.78	310.29 S	1.12	380.92
7939.51	3.35	215.45	7913.55	315.85 S	1.12	387.74
8039.51	2.24	215.45	8013.43	319.82 S	1.12	392.62
8139.51	1.12	215.45	8113.38	322.21 S	1.12	395.55
8239.51	0.00	215.45	8213.38	323.00 S	1.12	396.52
8500.00	0.00	215.45	8473.87	323.00 S	0.00	396.52
9000.00	0.00	215.45	8973.87	323.00 S	0.00	396.52
9500.00	0.00	215.45	9473.87	323.00 S	0.00	396.52
10000.00	0.00	215.45	9973.87	323.00 S	0.00	396.52
10500.00	0.00	215.45	10473.87	323.00 S	0.00	396.52
11000.00	0.00	215.45	10973.87	323.00 S	0.00	396.52
11176.13	0.00	215.45	11150.00	323.00 S	0.00	396.52

Est. Penetration of Straw

All data is in feet unless otherwise stated.  
Coordinates from slot #1 and TVD from rotary table.  
Bottom hole distance is 396.52 on azimuth 215.45 degrees from wellhead.  
Vertical section is from N 0.00 E 0.00 on azimuth 215.45 degrees.  
Calculation uses the minimum curvature method.  
Presented by Baker Hughes INTEQ



Tamarack Petroleum Company Inc.

Hood 8-1, slot #1  
LEA COUNTY, NEW MEXICO

PROPOSAL LISTING Page 2  
Your ref : S Curve, 3 Deg BUR  
Last revised : 7-Mar-2000

Measured Depth	Inclin. Degrees	Azimuth Degrees	True Vert Depth	R E C T A N G U L A R C O O R D I N A T E S	Dogleg Deg/100ft	Vert Sect
11500.00	0.00	215.45	11473.87	323.00 S	0.00	396.52
12000.00	0.00	215.45	11973.87	323.00 S	0.00	396.52
12226.13	0.00	215.45	12200.00	323.00 S	0.00	396.52

All data is in feet unless otherwise stated.  
Coordinates from slot #1 and TVD from rotary table.  
Bottom hole distance is 396.52 on azimuth 215.45 degrees from wellhead.  
Vertical section is from N 0.00 E 0.00 on azimuth 215.45 degrees.  
Calculation uses the minimum curvature method.  
Presented by Baker Hughes INTEQ

Tamarack Petroleum Company Inc.  
Hood 8-1, slot #1  
, LEA COUNTY, NEW MEXICO

PROPOSAL LISTING Page 3  
Your ref : S Curve, 3 Deg BUR  
Last revised : 7-Mar-2000

Comments in wellpath

MD	TVD	Rectangular Coords.	Comment
11176.13	11150.00	323.00 S 230.00 W	Est. Penetration of Strawn

Targets associated with this wellpath

Target name	Geographic Location	T.V.D.	Rectangular Coordinates	Revised
	11150.00	323.00S	230.00W	2-Nov-1999