

UNITED STATES
DEPARTMENT OF THE INTERIOR
SUPPLEMENTARY APPLICATION FOR
NATURAL GAS CATEGORY DETERMINATION

RECEIVED

SEP 10 1987

FORM APPROVED
OMB NO. 1004-0149
Expires: January 31, 1986

O C D

ARTESIA OFFICE

This form is required by the Bureau of Land Management (BLM) and the Minerals Management Service (MMS) the jurisdictional agencies created by the Natural Gas Policy Act of 1978, 95-621, for Federal, Indian, and OCS lands. The data requested is a requirement of the Federal Energy Regulatory Commission regulation 18 CFR 274, Determinations by Jurisdictional Agencies. Such data must be forwarded to the Federal Energy Regulatory Commission by the Authorized Officer.

11. Applicant McKay Oil Corporation ✓ Address (Including zip code) P. O. Box 2014, Roswell, NM 88201 Telephone (Including area code) 505/623-4735	1. API Well No. 30-005-62397 2. Lease No. NM-32322-A 3. Lease Name and Well No. Middle Fork Federal #2 4. Sec., T. & R. Section 8-6S-23E 5. Area and Block (OCS) 6. Field West Pecos Slope Abo 7. Reservoir Abo sand
12. Request Category for Determination ☐ Section 102(c)(1)(B), New Onshore Wells ☐ Section 102(c)(1)(C), New Onshore Reservoirs ☐ Section 102(d), New Reservoirs on Old OCS Leases ☒ Section 103(c), New Onshore Production Well ☒ Section 107(c), High-Cost Natural Gas ☐ Section 108(b), Stripper-Well Natural Gas	8. State, District, and County NM, Roswell, Chaves
13. Person Responsible for Answering Questions Cindy L. Kelton Address (Including zip code) P. O. Box 2014, Roswell, NM 88201 Telephone (Including area code) 505/623-4735	9. Operator McKay Oil Corporation 10. Type of Well: ☐ Oil Well ☒ Gas Well
14. Newspaper, City, State, and Date (or expected date) of Notice Roswell Daily Record, Roswell, NM	
15. Gas Purchaser New Mexico Gas Marketing, Inc. Address (Including zip code) P. O. Box 2014, Roswell, NM 88201 Gas Purchaser Address (Including zip code)	
16. Lessee and/or Working Interest Owner See attached Exhibit "A" Address (Including zip code) Lessee and/or Working Interest Owner Address (Including zip code)	

17. Attach the Appropriate Checklist and Support Data (See instructions)
I certify that the foregoing and the checklist attached are true and correct to the best of my knowledge as determined from available record

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States a false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

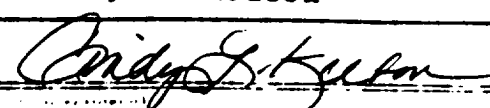
Name Cindy L. Kelton	Title Assistant to the President
Signature 	Date September 9, 1987

EXHIBIT "A"

McKay Oil Corporation
Middle Fork Federal #2
Section 8-6S-23E
API No. 30005-62397
Chaves County, New Mexico

Working Interest Owners

Royale Petroleum Corporation
Wells Fargo Bank Building
101 West Broadway, Suite 1777
San Diego, California 92101

McKay Oil Corporation
P.O. Box 2014
Roswell, NM 88201

LOG Partners
868 McClelland Street
Salt Lake City, Utah 84102

Flagstaff Land Associates
2222 S. Dobson Road, Suite 6A
Mesa, AZ 85202

DENCO Oil & Gas Investments
2222 S. Dobson Road, Suite 6A
Mesa, AZ 85202

DENCO Oil Properties
2222 S. Dobson Road, Suite 6A
Mesa, AZ 85202

DENCO Oil Partners
2222 S. Dobson Road, Suite 6A
Mesa, AZ 85202

McKay Children's Trust
P.O. Box 2014
Roswell, NM 88201

Ventana Limited Partnership
3567 E. Sunrise Drive
Suite 235
Tucson, AZ 85718

Gas Purchaser

New Mexico Gas Marketing, Inc.
P. O. Box 2014
Roswell, New Mexico 88201

U.S. DEPARTMENT OF ENERGY
Federal Energy Regulatory Commission
Washington, D.C. 20426

**APPLICATION FOR DETERMINATION OF THE MAXIMUM LAWFUL
PRICE UNDER THE NATURAL GAS POLICY ACT (NGPA)**
(Sections 102, 103, 107 and 108)

PLEASE READ BEFORE COMPLETING THIS FORM:

General Instructions:

Complete this form if you are applying for price classification under sections 102, 103, 107 or 108 of the NGPA. A separate application is required for each well. If any reservoir qualifies for a category which differs from the category applicable to the producing well, separate applications must be made for the producing well and the reservoir. Complete each appropriate item on the reverse side of this page. The code numbers used in items 4.0 and 6.0 can be obtained from the Buyer/Seller Code Book. If there is more than one purchaser or contract, identify the additional information in the space below. Enter any additional remarks in the space below.

Submit the completed application to the appropriate Jurisdictional Agency as listed in title 18 of the CFR, part 270.103. If there are any questions, call (202) 275-4539.

Specific Instructions for Item 2.0, Type of Determination:

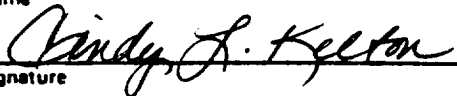
<u>Section of NGPA</u>	<u>Category Code</u>	<u>Description</u>
102	1	New OCS Lease
102	2	New onshore well (2.5 mile test)
102	3	New onshore well (1,000 feet deeper test)
102	4	New onshore reservoir
102	5	New reservoir on old OCS Lease
103	—	New onshore production well
107	—	High cost natural gas
108	—	Stripper well

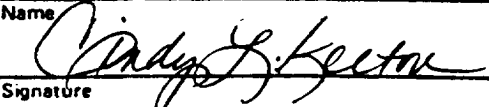
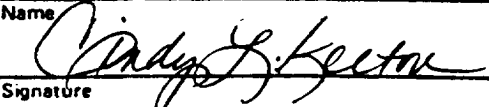
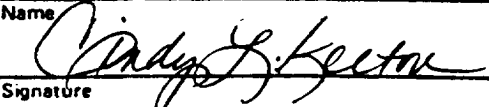
Other Purchasers/Contracts:

<u>Contract Date</u> (Mo. Day Yr.)	<u>Purchaser</u>	<u>Buyer Code</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____

Remarks:

McKay Oil Corporation
Middle Fork Federal #2

1.0 API well number: (If not available, leave blank. 14 digits.)	30-005-62397			
2.0 Type of determination being sought: (Use the codes found on the front of this form.)	103 Section of NGPA		(c) Category Code	
3.0 Depth of the deepest completion location: (Only needed if sections 103 or 107 in 2.0 above.)	3376 feet			
4.0 Name, address and code number of applicant: (35 letters per line maximum. If code number not available, leave blank.)	McKay Oil Corporation Name P. O. Box 2014 Street Roswell NM 88201 City State Zip Code			
5.0 Location of this well: [Complete (a) or (b).] (a) For onshore wells (35 letters maximum for field name.)	West Pecos Slope Abo Field Name Chaves NM County State			
(b) For OCS wells:	Area Name Block Number Date of Lease: Mo. Day Yr. OCS Lease Number			
(c) Name and identification number of this well: (35 letters and digits maximum.)	Middle Fork Federal #2			
(d) If code 4 or 5 in 2.0 above, name of the reservoir: (35 letters maximum.)	Abo sand			
6.0 (a) Name and code number of the purchaser: (35 letters and digits maximum. If code number not available, leave blank.)	New Mexico Gas Marketing, Inc. Name Buyer Code			
(b) Date of the contract:	0, 3, 2, 8, 8, 6 Mo. Day Yr.			
(c) Estimated annual production:	136 MMcf.			
	(a) Base Price (\$/MMBTU)	(b) Tax	(c) All Other Prices [Indicate (+) or (-).]	(d) Total of (a), (b) and (c)
7.0 Contract price: (As of filing date. Complete to 3 decimal places.)	1.731	-.168	-.-.-	1.899
8.0 Maximum lawful rate: (As of filing date. Complete to 3 decimal places.)	*** DEREGULATED ***			
9.0 Person responsible for this application:	Cindy L. Kelton Assistant to the Name Title President  Signature September 9, 1987 505/623-4735 Date Application is Completed Phone Number			
Agency Use Only Date Received by Juris. Agency Date Received by FERC				

1.0 API well number: (If not available, leave blank. 14 digits.)	30-005-62397						
2.0 Type of determination being sought: (Use the codes found on the front of this form.)	107 Section of NGPA		(c) Category Code				
3.0 Depth of the deepest completion location: (Only needed if sections 103 or 107 in 2.0 above.)	3376 feet						
4.0 Name, address and code number of applicant: (35 letters per line maximum. If code number not available, leave blank.)	McKay Oil Corporation Name P. O. Box 2014 Seller Code Street Roswell NM 88201 City State Zip Code						
5.0 Location of this well: [Complete (a) or (b).] (a) For onshore wells (35 letters maximum for field name.)	West Pecos Slope Abo Field Name Chaves NM County State						
(b) For OCS wells:	Area Name Block Number Date of Lease: Mo. Day Yr. OCS Lease Number						
(c) Name and identification number of this well: (35 letters and digits maximum.)	Middle Fork Federal #2						
(d) If code 4 or 5 in 2.0 above, name of the reservoir: (35 letters maximum.)	Abo sand						
6.0 (a) Name and code number of the purchaser: (35 letters and digits maximum. If code number not available, leave blank.)	New Mexico Gas Marketing, Inc. Name Buyer Code						
(b) Date of the contract:	0 3 2 8 8 6 Mo. Day Yr.						
(c) Estimated annual production:	136 MMcf.						
		(a) Base Price (\$/MMBTU)	(b) Tax	(c) All Other Prices [Indicate (+) or (-).]	(d) Total of (a), (b) and (c)		
7.0 Contract price: (As of filing date. Complete to 3 decimal places.)		1.731	.168	.---	1.899		
8.0 Maximum lawful rate: (As of filing date. Complete to 3 decimal places.)		6.400	.182	+.192	6.774		
9.0 Person responsible for this application:	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:30%; vertical-align: top;"> Agency Use Only Date Received by Juris. Agency Date Received by FERC </td> <td style="width:70%; vertical-align: top;"> Cindy L. Kelton Name Assistant to the Title President  Signature September 9, 1987 Date Application is Completed 505/623-4735 Phone Number </td> </tr> </table>					Agency Use Only Date Received by Juris. Agency Date Received by FERC	Cindy L. Kelton Name Assistant to the Title President  Signature September 9, 1987 Date Application is Completed 505/623-4735 Phone Number
Agency Use Only Date Received by Juris. Agency Date Received by FERC	Cindy L. Kelton Name Assistant to the Title President  Signature September 9, 1987 Date Application is Completed 505/623-4735 Phone Number						

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

RECEIVED C/SF

Type Test ☒ Initial ☐ Annual ☐ Special		Test Date 7-19-87		NOV 08 '88	
Company MCKAY OIL CORPORATION			Connection Air		
Pool W. Pecos Slope <i>Wys</i>			Formation Abo		
Completion Date 7-19-87		Total Length 3500'		Plug Back TD 3428'	
Elevation 4178 GR		Farm or Lease Name Middlefork Federal			
Csg. Size 4-1/2"	Wt. 9.5#	d 4.090	Set At 3495'	Perforations: From 2973.5 To 3376.0	
Tub. Size 2-3/8	Wt. 4.7#	d 1.995	Set At 2914'	Perforations: From -- To --	
Type Well - Single - Bradenhead - G.C. or G.O. Multiple Single			Packer Set At --		County Chaves
Producing Thru Tubing		Reservoir Temp. °F 90 @ 3174.75		Mean Annual Temp. °F 60	
Baro. Press. - P _a 13.2		State New Mexico			
L 3174.75	H 3174.75	G _g 0.587	% CO ₂ 0.00	% N ₂ 6.507	% H ₂ S 0.00
Prover 2.00		Meter Run --		Taps --	

FLOW DATA						TUBING DATA		CASING DATA		Duration of Flow	
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h _w	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.		Temp. °F
SI							952		957		SI 72 HRS.
1.	2.000		.250	102	--	99.5	882		884		60 MIN.
2.	2.000		.250	148	--	98	794		797		60 MIN.
3.	2.000		.250	180	--	88	687		693		60 MIN.
4.	2.000		.375	87	--	88	572		577		60 MIN.
5.											

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor Ft.	Gravity Factor F _g	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd
1	1.087	--	115.2	.9641	1.305	1.006	158
2	1.087	--	161.2	.9653	1.305	1.008	222
3	1.087	--	193.2	.9741	1.305	1.010	270
4	2.378	--	100.2	.9741	1.305	1.005	304
5							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	A.P.I. Gravity of Liquid Hydrocarbons	Specific Gravity Separator Gas	Specific Gravity Flowing Fluid	Critical Pressure	Critical Temperature
1	0.17	559.5	1.68	.988	0	0	0.587	X X X X X X X X	661	333
2	0.24	558	1.68	.984				X X X X X		
3	0.29	548	1.65	.980						
4	0.15	548	1.65	.990						
5										

NO.	P _r	P _w	P _w ²	P _r ² - P _w ²
1	970.2	897.2	805.0	136.3
2	941.3	810.2	656.4	284.9
3		706.2	498.7	442.6
4		590.2	348.3	593.0
5				

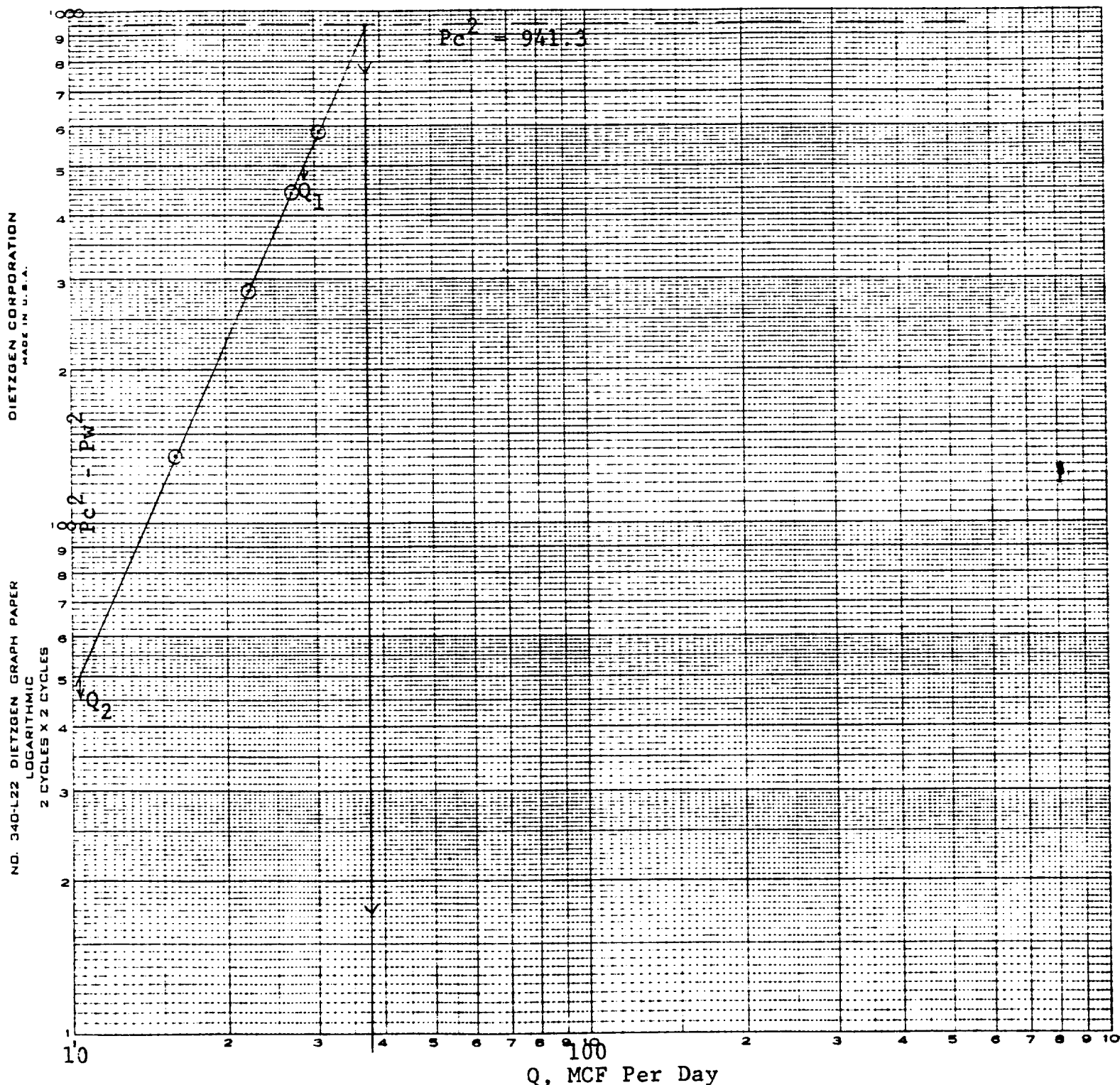
(1) $\frac{P_r^2}{P_r^2 - P_w^2} = 1.587$		(2) $\left[\frac{P_r^2}{P_r^2 - P_w^2} \right]^n = 1.228$	
AOF = Q $\left[\frac{P_r^2}{P_r^2 - P_w^2} \right]^n = 373.3$			

Absolute Open Flow	373	Mcfd @ 15.025	Angle of Slope °	66.08	Slope, n	0.444
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Remarks: No water produced during test; no evidence of water in the tubing.			
Approved By Division	Conducted By: D. Kelton	Calculated By: C. Sanders	Checked By: P. Stewart

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MCKAY OIL CORPORATION
 Middlefork Federal #2
 Sec. 8, T6S, R23E
 7-19-87



$$Q_1 = 286; \log = 2.45637$$

$$Q_2 = 103; \log = 2.01284$$

$$n = 0.44353$$

$$n = 0.444$$

AOF = 373 MCF Per Day



PRECISION SERVICE INC.

Flow Measurement Engineers

Analysis Results Summary

Casper, WY 82601

Run No 3050-3
Date Run 7/24/87
Date Sampled 7/19/87

Analysis For: MCKAY OIL CO. #2
Lease: PECOS SLOPE ABO
Location: MIDDLE FORK FED. #3
Purpose: _____
Sampling Temp. 98 °F
Volume/day: _____
Pressure on Bomb 150
Producer: _____
County: CHAVES State: NEW MEXICO
Sampled By: _____
Atmos Temp. _____ °F
Formation: _____
PSIG: Line Pressure 150 PSIG

Gas Component

Analysis

Press. Base: 14.73

	Mol. %	Liq. %	GPM Per MCF
Carbon Dioxide CO ₂			
Oxygen O ₂			
Nitrogen N ₂	<u>6.507</u>		
Hydrogen Sulfide H ₂ S			
Methane C ₁	<u>92.574</u>		
Ethane C ₂	<u>.700</u>		<u>.187</u>
Propane C ₃	<u>.142</u>		<u>.039</u>
Iso-Butane IC ₄	<u>.019</u>		<u>.006</u>
Nor-Butane NC ₄	<u>.059</u>		<u>.018</u>
Iso-Pentane IC ₅			
Nor-Pentane NC ₅			
Hexanes plus			
Hexanes C ₆			
Heptanes			
Heptanes Plus C ₇ +			
Total	<u>100.000</u>		<u>.250</u>
Pentane + G.P.M.			
Propane + GPM			<u>.064</u>
26-lb Gasoline			

BTU Dry 957
BTU Wet 940
Calc. Specific Gravity .587

@ Std. Press. 14.696

BTU Dry 955
BTU Wet 938

Calc. Vap. Press. #/Sq. In. _____

Reid Vap. Press. #/Sq. In. _____

Z Factor .9982
N Value 1.3120

Ave Mol Wt 16.9927
Ave Cu Ft/Gal _____

Run by MARY DEMOS

Calculated By EVELYN SWANSON

Remarks:

Distribution: