

### **United States Department of the Interior**

BUREAU OF LAND MANAGEMENT ROSWELL FIELD OFFICE 2909 West Second Street Roswell, New Mexico 88201-2019

IN REPLY REFER NMNM106852X 3180 (06300)

OCT 22 2001

Primero Operating, Inc. Attention: Mr. Phelps White P. O. Box 1433 Roswell, NM 88202

Gentlemen:

Your application of October 15, 2001, filed with the BLM requests the designation of the Cat Head Mesa Unit area, embracing 37,338.86 acres, more or less, Socorro County, New Mexico, as logically subject to exploration and development under the unitization provisions of the Mineral Leasing Act as amended.

Pursuant to unit plan regulations 43 CFR 3180, the land requested as outlined on your plat marked Exhibit A, Primero Operating, Inc., Cat Head Mesa Unit, Socorro County, New Mexico, is hereby designated as a logical unit area and has been assigned No. NMNM106852X. This designation is valid for a period from one year from the date of this letter.

The unit agreement submitted for the area designated should provide for a well to test the Atoka formation, or to a depth of 4220 feet, whichever is the lesser depth. Your proposed use of the Form of Agreement for Unproved Areas will be accepted. Corrections to the State acreage and total acres of the unit which is shown on the Summary on Page 6 of Exhibit B is marked in red on the enclosed Exhibit. You will also need to correct the same on Exhibit A.

If conditions are such that modification of said standard form is deemed necessary, two copies of the proposed modifications with appropriate justification must be submitted to this office for preliminary approval.

In the absence of any type of land requiring special provisions or any objections not now apparent, a duly executed agreement identical with said form, modified as outlined above, will be approved if submitted in approvable status within a reasonable period of time. However, notice is hereby given that the right is reserved to deny approval of any executed agreement submitted which in our opinion, does not have the full commitment of sufficient lands to afford effective control of operations in the unit area.

When the executed agreement is transmitted to the BLM for final approval, include the latest status of all acreage. In preparation of Exhibits "A" and "B", follow closely the format of the sample exhibits attached to the reprint of the aforementioned form.

NOV | 5 200 

Inasmuch as this unit agreement involves State and Fee lands, a copy of the letter is being sent to the Commissioner of Public Lands and the NMOCD. Please contact the State of New Mexico before soliciting joinders regardless of prior contacts or clearances from the state.

Sincerely,

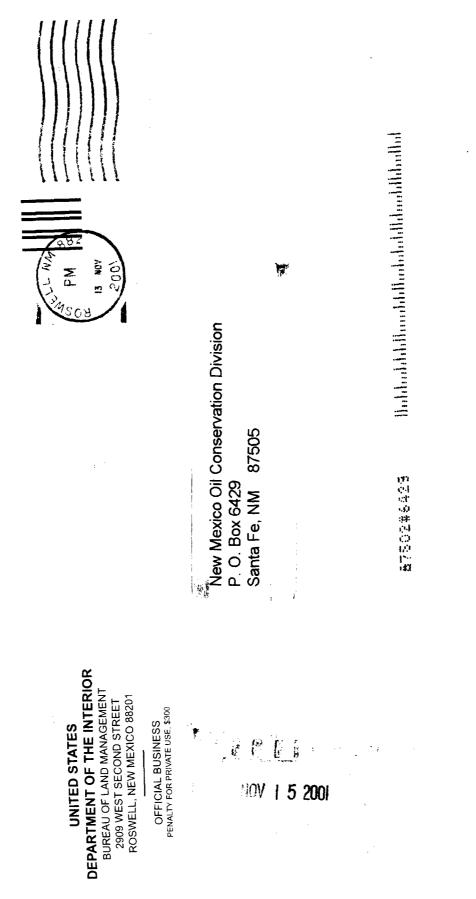
## /S/ Larry D. Bray

Larry D. Bray Assistant Field Manager, Lands and Minerals

cc: Commissioner of Public Lands, Santa Fe NMOCD, Santa Fe

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BEN DONEGAN 3224 CANDELARIA NE ALBUQUERQUE, NEW MEXICO 87107

505 884-2780 FAX 505 888-2621

Case 12766

December 12, 2001

Director New Mexico Oil Conservation Division 1220 South St. Francis Drive Santa Fe, New Mexico 87504

Re: Order No. R-11698, Cat Head Mesa Unit Agreement

Dear Director:

Pursuant to New Mexico Oil Conservation Division Order No. R-11698 (Case No. 12766) of November 28, 2001 regarding the Cat Head Mesa Unit, we submit the following:

- 1. Original and one copy of the Cat Head Mesa Unit Agreement executed by the Operator, Primero Operating, Inc. and all of the working interest owners of the oil and gas leases covering all of the 37,339.04 acres, more or less, in the Cat Head Mesa Unit Area. Included with each copy of the Unit Agreement are Exhibit A, Map showing the boundary of the Unit Area and the boundaries and identities of all tracts and leases in the Unit Area and Exhibit B, Schedule of Ownership and current status of all oil and gas interests in the Unit Area.
- 2. Original and one copy of the Cat Head Mesa Unit Ratification and Joinder of the Cat Head Mesa Unit Agreement executed by Bowerman Energy Company, Ben and Ruby Donegan, E.S. Mayer & Sons, Ltd., Frizzell Exploration Company II, Integras Resources, Inc., Jacobs Exploration, Ltd., JHJ Exploration, Ltd., Stephen D. and Nancy J. Nolan, Saxon Oil Company, Tucker-Scully Interests, Ltd., Judith Ann Lovelace and Harvey Mineral Trust.
- 3. All of the owners of oil and gas interests in the Cat Head Mesa Unit Area, including the owners of royalty and overriding royalty interests shown on Exhibit B of the Cat Head Mesa Unit Agreement, have been mailed offers to commit their interests to the Unit Agreement. Copies are enclosed of each of the U.S. Post Office Certified Mail Receipts confirming the mailing, delivery or attempted delivery of our Unit Agreement to those parties that have not as yet returned executed Ratification and Joinder instruments.

Page 2 December 12, 2001 New Mexico Oil Conservation Division Cat Head Mesa Unit Agreement

> 4. Original and one copy of the Cat Head Mesa Operating Agreement executed by the Operator, Primero Operating, Inc., and all of the owners of the oil and gas leases covering all of the lands in the Unit Area.

Copies of the above described documents are also being submitted to the New Mexico State Land Office and the Bureau of Land Management.

One hundred per cent of the working interest owners of the oil and gas leases covering all of the lands in the Unit Area have committed their interests to the Unit Agreement. Owners of 4.017786 per cent overriding royalty interest in the leases covering all of the lands in the Unit Area have committed their interests to the Unit Agreement while owners of 0.982214 per cent overriding royalty interests in the leases covering all of the lands in the Unit Area have not as yet committed their interests to the Unit Agreement. Fee royalty owners of 1.173936 per cent of the total interests in the Unit Area have committed their interests to the Unit Agreement while fee royalty owners of 0.267876 per cent of the total interests in the Unit Area have not as yet committed their interests to the Unit Agreement.

In summary, the working interests, royalty interests and overriding royalty interests committed to date to the Unit Agreement when combined with the state and federal royalty interests comprise 98.749910 per cent of the total oil and gas interests in the Unit Area.

Very truly yours,

Primero Operating, Inc. Den onju

Ben Donegan, Agent

BD/nn encl.

#### OIL AND GAS

In the event of any dispute relative to such costs, the division shall determine the proper costs after due notice to interested parties and a hearing thereon. The division is specifically authorized to provide that the owner or owners drilling, or paying for the drilling, or for the operation of a well for the benefit of all shall be entitled to all production from such well which would be received by the owner, or owners, for whose benefit the well was drilled or operated, after payment of royalty as provided in the lease, if any, applicable to each tract or interest, and obligations payable out of production, until the owner or owners drilling or operating the well or both have been paid the amount due under the terms of the pooling order or order settling such dispute. No part of the production or proceeds accruing to any owner or owners of a separate interest in such unit shall be applied toward the payment of any cost properly chargeable to any other interest in said unit.

If the interest of any owner or owners of any unleased mineral interest is pooled by virtue of this act, seven-eighths of such interest shall be considered as a working interest and one-eighth shall be considered a royalty interest, and he shall in all events be paid one-eighth of all production from the unit and creditable to his interest.

D. Minimum allowable for some wells may be advisable from time to time, especially with respect to wells already drilled when this act takes effect, to the end that the production will repay reasonable lifting cost and thus prevent premature abandonment and resulting waste.

E. Whenever it appears that the owners in any pool have agreed upon a plan for the spacing of wells, or upon a plan or method of distribution of any allowable fixed by the division for the pool, or upon any other plan for the development or operation of such pool; which plan, in the judgment of the division, has the effect of preventing waste as prohibited by this act and is fair to the royalty owners in such pool, then such plan shall be adopted by the division with respect to such pool; however, the division, upon hearing and after notice, may subsequently modify any such plan to the extent necessary to prevent waste as prohibited by this act.

F. After the effective date of any rule, regulation or order fixing the allowable production, no person shall produce more than the allowable production applicable to him, his wells, leases or properties determined as in this act provided, and the allowable production shall be produced in accordance with the applicable rules, regulations or orders.

History: Laws 1935, ch. 72, § 12; 1941 Comp., § 69-213<sup>1</sup>/<sub>3</sub>; Laws 1949, ch. 168, § 13; 1953, ch. 76, § 1; 1953 Comp., § 65-3-14; Laws 1961, ch. 65, § 1; 1973, ch. 250, § 1; 1977, ch. 255, § 51.

**Meaning of "this act".** — The term "this act," referred to in this section, means Laws 1935, ch. 72, §§ 1 to 24, which appear as 70-2-2 to 70-2-4, 70-2-6 to 70-2-11, 70-2-15, 70-2-16, 70-2-21 to 70-2-25, 70-2-27 to 70-2-30, and 70-2-33 NMSA 1978.

2-27 to 70-2-30, and 70-2-33 NMSA 1978. **The thrms "spacing unit" and "proration unit" are not synonymous and the commission has power to fix spacing units without first creating** prevation units. Rutter & Wilbanks Corp. v. Oil Conservation Comm'n, 87 N.M. 286, 532 P.2d 582 (1975)

**Proration formula required to be based on** recoverable gas. — Lacking a finding that new gas proration formula is based on amounts of recoverable gas in pool and under tracts, insofar as these amounts can be practically determined and obtained without waste, a supposedly valid order in current use cannot be replaced. Such findings are necessary requisites to validity of the order, for it is upon them that the very power of the commission to act depends. Continental Oil Co. v. Oil Conservation Comm'n, 70 N.M. 310, 373 P.2d 809 (1962). Findings required before correlative rights according of the product according to the product accordi

Findings required before correlative rights ascertained. — In order to protect correlative rights, it is incumbent upon commission to determine, "so far as it is practical to do so," certain foundationary matters, without which the correlative rights of various owners cannot be ascertained. Therefore, the commission, by "basic conclusions of fact" (or what might be termed "findings"), must determine, insofar as practicable: (1) amount of recoverable gas under each producer's tract; (2) the total amount of recoverable gas in pool; (3) proportion that (1) bears to (2); and (4) what portion of arrived at proportion can be recovered without waste. That the extent of the correlative rights must first be determined before commission can act to protect them is manifest. Continental Oil Co. v. Oil Conservation Comm'n, 70 N.M. 310, 373 P.2d 809 (1962).

In addition to making such findings the commission, "insofar as is practicable, shall prevent drainage between producing tracts in a pool which is not equalized by counter-drainage," under the provisions of 70-2-16 NMSA 1978. Continental Oil Co. v. Oil Conservation Comm'n, 70 N.M. 310, 373 P.2d 809 (1962).

Four basic findings required to adopt a production formula under this section can be made in language equivalent to that required in previous decision construing this section. El Paso Natural Gas Co. v. Oil Conservation Comm'n, 76 N.M. 268, 414 P.2d 496 (1966) (explaining Continental Oil Co. v. Oil Conservation Comm'n, 70 N.M. 310, 373 P.2d 809 (1962)).

Although subservient to prevention of waste and perhaps to practicalities of the situation, protection of correlative rights must depend upon commission's (now division's) findings as to extent and limitations of the right. This the commission is required to do

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### NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

GARY E. JOHNSON Governor BETTY RIVERA Cabinet Secretary Lori Wrotenbery Director Oil Conservation Division

December 10, 2002

Mr. Ben Donegan 3224 Candelaria N.E. Albuquerque, New Mexico 87107

Re: Designation of Discovery Well for the Cat Head Mesa Unit Socorro County, New Mexico

Dear Mr. Donegan:

We are in receipt of your application of November 11, 2002, together with data that supports your commercial determination regarding the Cat Head Mesa Well No. 1. This office concurs with your determination of commerciality and please be advised that this office's approval is contingent upon approval from the Commissioner of Public Lands and the Bureau of Land Management.

If you have any questions pertaining to this matter, please contact me at (505) 476-3470.

Sincerely

ROY E/JOHNSON Senior Petroleum Geologist

cc: State Land Office Attn: Pete Martinez

> Bureau of Land Management Attn. Armando Lopez

> > Oil Conservation Division \* 1220 South St. Francis Drive \* Santa Fe, New Mexico 87505 Phone: (505) 476-3440 \* Fax (505) 476-3462 \* <u>http://www.emnrd.state.nm.us</u>

### BEN DONEGAN 3224 CANDELARIA NE ALBUQUERQUE, NEW MEXICO 87107

# CONFIDENTIAL

505 884-2780

November 11, 2002

NOV 1 3 2002  $\{x_i\}_{i=1}^{N-1} = \{x_i\}_{i=1}^{N-1}$ . . . . 

Attention: Armando Lopez Bureau of Land Management 2209 West Second Street Roswell, NM 88021

Attention: Pete Martinez Oil, Gas and Minerals Division New Mexico State Land Office 310 Old Santa Fe Trail Santa Fe, NM 87501

Attention: Roy Johnson New Mexico Oil Conservation Division 1220 South St. Francis Drive Santa Fe, NM 87504

Re: Request for Designation of Discovery Well Status for the Cat Head Mesa Unit, Socorro County, New Mexico

### Gentlemen:

Primero Operating, Inc., Operator of the Cat Head Mesa Unit, Socorro County, New Mexico requests your designation of discovery well status for the unit in accordance with the provisions of Section 9. DRILLING TO DISCOVERY of the Cat Head Mesa Unit Agreement. Test results from the current re-entry of the No. 1 Cat Head Mesa Unit well located in the NE4SW4 of Section 8 and the earlier drilling of the No. 1 Dulce Draw State well located in the SW4NW4 of Section 2, T. 4 S., R. 9 E. indicate potentially very large accumulations of helium and carbon dioxide on the 37,000 acre anticline in the Cat Head Mesa Unit Area.

The carbon dioxide and nitrogen encountered in the three Abo zones perforated in the No. 1 Dulce Draw State well were originally considered to be only a local occurrence and the well was plugged and abandoned. Later, when (1) the Bureau of Land Management at Amarillo analyzed 2% helium in the only remaining sample of gas from the well (the original helium content of the sample may have been greater than 4% as indicated by the .43% argon in the sample) and (2) carbon dioxide, nitrogen and helium along with drilling fluid were recovered from all of the four zones perforated in the Abo and Atoka formations in the No. 1 Cat Head Mesa Unit well, the potential magnitude of the Cat Head Mesa anticline as a large multi-reservoir helium and carbon dioxide gas field was realized. Page 2 November 11, 2002 Request for Designation of Discovery Well Status for the Cat Head Mesa Unit, Socorro County, New Mexico

In addition to the seven zones perforated to date, thirteen additional zones in the two wells are potential gas reservoirs as indicated on the enclosed copies of the Triple Combo log of the No. 1 Cat Head Mesa well and the Dual Burst Thermal Decay Time log of the No. 1 Dulce Draw State well. These thirteen untested zones, the seven zones perforated to date and the test results are shown on the enclosed "Potential Gas Zones" summaries and on the enclosed "Cross Section B-B'." Copies of the daily completion reports for the two wells and the Bureau of Land Management and Wildcat Measurement Service analyses of gases sampled from the wells are also enclosed. The helium content of the samples is shown only on the Bureau of Land Management analyses as the Wildcat Measurement Service analytical equipment was not programmed to analyze helium.

Further testing of the No. 1 Cat Head Mesa Unit well and the re-entry of the No. 1 Dulce Draw State well are planned as none of the zones perforated in the two wells were adequately cleaned out, swabbed down or tested after the gases were found to be nonflammable. However, the New Mexico Oil Conservation Division has now requested that further testing of the wells be delayed while certain helium regulatory issues are being adjudicated.

In conclusion, the discovery of potentially substantial reserves of helium and carbon dioxide is indicated by the test results from the two wells drilled to date on the Cat Head Mesa anticline. Designation of discovery status for the Cat Head Mesa Unit now will promote the prevention of waste, the conservation of unitized substances, the protection of correlative rights and the unified development and operation of the Cat Head Mesa Unit Area. We therefore respectfully request your designation of discovery well status for the Cat Head Mesa Unit in accordance with the provisions of Section 9. DRILLING TO DISCOVERY of the Cat Head Mesa Unit Agreement.

Very truly yours,

Primero Operating, Inc.

By: Ber Konegen Ben Donegan, Agent

Primero Operating, Inc. No. 1 Dulce Draw State SWNW 2, T. 4 S., R. 9 E. Socorro County, New Mexico

Elevation: 5961' GL, 5972' KB

Formation	Тор	<u>Thickness</u>
Permian San Andres Limestone	At surface At surface	3803'+ 491'+
Glorieta Sandstone	491'(+5481)	<sup>431</sup> + 294'
Yeso Formation	785'(+5187)	1429'
Joyita Member	785'(+5187)	155'
Cañas Member	913'	194'
Torres Member	1097'	843'
Meseta Blanca Member (Tubb)	1940'	274'
Abo Formation	2214'(+3758)	1589'
Precambrian	3803'(+2169) 4022'	219'+
TD	9044	

Perf 3064-74' (Abo) Spot 5 B 7.5% HCl, F 400-600 MCFG/D (27% CO2, 71% N2, 2% Cl+C2) SITP 590#

Perf 2832-46' (Abo) Swab est 300 B gassy SW/D (SW=90,000 ppm Cl) (Headspace gas 81% CO2, 19% N2)

Perf 2642-50' (Abo) FG tstm (31% CO2, 68% N2, 1% Cl), SITP 200#

Dulce Draw State No. 1 Well

### Abo Granite Wash Potential Gas Zones

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2522-28, 2592-95
2640-50
   8-6 Perf 2642-50
   8-7 Swab 64 B gassy W
   8-8 SITP 200, FG tstm, P&A
2756-60
2832-58'
                Perf 2832-46, Swab 74 BW/6hrs
   7-27
   7-28, 29
                Shut down
   7-30
               Swab 90 B gassy W (90,000 ppm Cl, Drlg water * 100,000 ppm)
   7-31 to 8-2 Shut down for repairs
   8-3
                Pulled plug
3064-74
   7-20 Perf 3064-74, Treat w/ 28 B acid, F est 150 MCFG/D w/30 BW
7-21 SITP 560 FG and 30 BW
7-23 SITP 580, FG and 15 BW
   7-24 SITP 570 F est 400 MCFG/D w/1BW/hr, Pulled plug
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3164-69, 3196-3202, 3256-66, 3293-96

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### **BLM - AMARILLO FIELD OFFICE**

### PRIMA 600 MASS SPECTROMETER ANALYSIS

### COMPANY NAME:

PRIMERO OPERATING, INC.

WELL NAME: **DULCE DRAW STATE 1** DATE COLLECTED: 010808 FS-20873 LAB NUMBER: MORRIS KEITH(?) SAMPLED BY: DATE ANALYZED: 011012 #, CO, ST, SEC T&R: SOCORRO NM 2 T04S R09E 300532001400 API #, LAT, LONG: ABO FORMATION 2642-2650' DEPTH

Component	Average	Std. Dev.
Hydrogen	0.02	0.000
Helium	2.02	0.013
Methane	0.85	0.019
Nitrogen	65.57	0.004
Ethane	0.00	0.000
Oxygen	0.00	0.000
H2S	0.00	0.000
Argon -	0.43 —	0.010
CO2	31.10	0.030
Propane	0.00	0.000
I-Butane	0.00	0.002
N-Butane	0.00	0.001
I-Pentane	0.00	0.001
N-Pentane	0.00	0.001
Hexanes+	0.00	0.000
Btu	9.00	0.000
Sp. Gr.	1.120	0.000

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				2832-46'	
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				SWADDER ESE SU	o b gassy
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Analy	sis for:	PRINERO OP	BRATING. IN	C. GPANGL.160	
We.		DULCE DRAW	STATE #1		
-		WILDCAT		Producer: PRINERO OPERATING. INC.	
	Number:			· · · · · · · · · · · · · · · · · · ·	e: NN
	-	WATER HEAD		Sampled By: NORRIS KRITH	
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Nitrogen	N 2	19.1490		Standard Pressure: BTU Dry:	
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Nethane	C1	0.0000			
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Iso-Butane	104	0.0000		N Value:	
Nor-Butane	NC4	0.0000		Avg Hol Weight:	
lso-Pentane Nor-Pentane	1C5 NC5	0.0000 0.0000		Avg CuPt/Gal: 26 Lb Product:	0.0000
NUL-rentalle	RUJ	0.0000		Nethane+ GPN:	0.0000
Hexanes Plus	C6+	0.0000		Ethane+ GPN:	0.0000
pondnoo tieb			•	Propane+ GPN:	0.0000
				Butane+ GPM:	0,0000
				Pentane+ GPM:	0.000
90#1 I		100 0000	0 0000		
TOTAL		100.0000	0.0000		

BEHARKS:

Approved by: DON NORMAN

Tue Jul 31 11:40:29 2001

Abo perforations; 2642-50' FG tstm after SI overnight w/200#TP

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EBMARKS:						

Thu Avig 09 09:14:31 2001

Approved by: DON ROBMAN

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Sthame	C2	0.0291	0.0078		
Propane	03	0.0000	0.0000	2 Factor:	0.9991
Iso-Butane	104	0.0000	0.0000	F Value:	
Nor-Butape	NC 4	0.0000	0.0000	Avg Kol Weight:	
Iso-Pentane	ICS	0.0000	0.0000	Avg CuPt/Gal:	
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				Butaner GPM:	
				Pentana+ GPN:	1.0609
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BENARES:					

Tue Jul 24 06-53:42 2001

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Approved by ECH NORMAN

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Non Jul 23 15:58:02 2001

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Approved by: DOE NORMAN

July 20, 2001 Well Completion Report

Primero Operating, Inc. Dulce Draw State #1 1980' FNL, 660' FWL Sec 2 T4S, R9E, Socorro County, NM

### Completion Day 5

RU Schlumberger. Tag TD @ 3,097'. Pressure casing to 1000 psi. Bond log excellent cement from TD to 1965' Casing perforate 3064' – 3,074' 4 jspf. 40 shots total. RD Schlumberger. TIH with Weatherford 9 5/8" packer to 3,074'. RU BJ Services. Circulate casing with 100 bbls KCL water. Spot 5 bbls 7 ½% HCI @ 3,074'. Pull up to 3,010' and reverse 6 bbls back into tubing. Set packer @ 3,010' Breakdown Abo sand formation @ 550 psi. Pump 28 bbls 7 ½% HCL with Pecos Slope additives. Drop 65 7/8" 1.3 SG RCN ballsealers. Avg rate 4 bpm. Total load to recover 54 bbls. Avg pressure – 400 psi. Poor ball action. Flush with 2% KCI water. ISIP – vacuum. RD BJ Services. RU swab. Initial fluid level – 2500'. Two swab runs and well began flowing acid gas and spent acid. Flow for two hours. @8:30 PM rig down swab and rig up choke. Leave flowing fluid and gas into pit on 10/64" choke for night @ 280 psia (150 MCFGPD if dry gas). Estimated load recovered – 30 bbl. Plan to check well @ 11:00 PM, 4:00 AM, 7:00 AM. Data on tomorrow's report.

Note - Location received 1" rain overnight but drained well.

BJ Services	\$ 5,530
Schlumberger	\$ 5,170
Gandy	\$ 1,150
WH Rentals	\$ 490
Key Energy	\$ 1,700
Supervision	\$ 575

Total \$14,615

Estimated Cumulative cost \$664,254

Morris Keith 505-910-4926

Please leave message. I will return all calls at top of each hour until I can get photos ringer repaired.

July 21, 2001 Well Completion Report

Primero Operating, Inc. Dulce Draw State #1 1980' FNL, 660' FWL Sec 2 T4S, R9E, Socorro County, NM

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**Completion Day 6** 

Shut well in @ 1:00 AM. Flowing @280 psi on 12/64". SITP @ 7:00 AM was 560 psi. Open well on 16/64" choke. Unloading water and unburnable gas.

8:00 AM - 275 psi	16/64	2 bbl	won't burn
9:00 AM - 325 psi	16/64	4 bbl	won't burn
10:00 AM - 320 psi	16/64	3 bbl	won't burn
11:00 AM - 325 psi	16/64	3 bbl	won't burn
12:00 PM -325 psi	20/64	5 bbl	won't burn
1:00 PM – 280 psi	24/64	3 bbl	won't burn
2:00 PM - 200 psi	24/64	3 bbl	won't burn
3:00 PM – 170 psi	24/64	3 bbl	won't burn
4:00 PM – 170 psi	24/64	3 bbl	won't burn
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30 bbls recovered. All acid load recovered. Shut in until Monday morning. Gas to be sampled Monday, July 23. Saturday's fluid samples delivered to BJ Services in Artesia to be analyzed and results sent to Primero office by Monday noon. Well will be opened for flow testing 6:00 AM Monday morning.

WH Rentals	\$	300
Key Energy	\$ 1	,500
Supervision	\$	575

Total \$2,375

Estimated Cumulative cost \$666,629

Morris Keith 505-910-4926

Please leave message on the cell phone and I will return all calls at top of each hour until I can get phone ringer repaired. Saturday night and Sunday morning I will be @ 505-748-3904 Room 113.

July 22, 2001 Well Completion Report

Primero Operating, Inc. Dulce Draw State #1 1980' FNL, 660' FWL Sec 2 T4S, R9E, Socorro County, NM

Completion Day 7

Shut down - Sunday

WH Rentals	\$ 300
T&C Tank	\$
Supervision	\$

Total \$ 300

Estimated Cumulative cost \$666,929

July 23, 2001 Well Completion Report

Primero Operating, Inc. Dulce Draw State #1 1980' FNL, 660' FWL Sec 2 T4S, R9E, Socorro County, NM

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Completion Day 8

SITP @ 6:00 AM - 580 psi. Open on 32/64" choke. Won't burn. Flowing gas and 2 bph fluid. 7:00 AM -200 psi 32/64 2bbl won't burn 8:00 AM - 120 psi 32/64 2 bbl won't burn 9:00 AM - 70 psi 48/64 1.5 bbl won't burn 10:00 AM - 45 psi 48/64 2 bbl won't burn gas sample #1 @ 10:30 11:00 AM - 40 psi 48/64 2 bbl won't burn 12:00 PM – 45psi 48/64 1 bbl won't burn 1:00 PM - 55 psi 48/64 1 bbl won't burn 2:00 PM - 50 psi 48/64 1 bbl won't burn 3:00 PM - 55 psi 48/64 1 bbl won't burn 4:00 PM - 50 psi 48/64 1 bbl won't burn 500 PM - 55 psi 64/64 1 bbl won't burn Shut in gas sample #2 @ 5:00 PM. Delivered sample to Roswell. Wildcat to run

Swab casing fluid level to 1900' in preparation for Wednesday's perforation of upper test.

WH Rentals	\$ 300
Key Energy	\$ 3,000
Supervision	\$ 875
T&C tank	\$ 100
Wildcat Measurement	\$ 1,000

Total \$5,275

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Estimated Cumulative cost \$672,204

Morris Keith 505-910-4926

July 24, 2001 Well Completion Report

Primero Operating, Inc. Dulce Draw State #1 1980' FNL, 660' FWL Sec 2 T4S, R9E, Socorro County, NM

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### **Completion Day 9**

SITP @ 7:00 AM – 570 psi. Open on 64/64" choke. Won't burn. Flowing gas and 1 bph fluid until 9:00 AM (50 psi on 3/4" choke ~ 400 MCFGPD). Tie kill truck on tubing and pump/circulate 20 bbls while releasing bypass on packer. Well is dead. Re-level and re set matting boards on rig. Ground is very soft and shifting. TOOH with packer. TIH with 9 5/8" cement retainer/CIBP. Plug unexplainably set @ 1,300'. No option but to drill out plug. Loaded casing with water, took 58 bbls. Plug was 9 stands under fluid level when it set. Job problem report to follow. Bill Hanson reverse unit to be on location @ 10:00 AM Wednesday.

WH Rentals	\$ 150
Key Energy	\$ 2,000
Supervision	\$ 600
T&C tank	\$ 100
Wildcat Measurement	\$ 600

Total \$3,450

Estimated Cumulative cost \$675,654

Morris Keith 505-910-4926

July 25, 2001 Well Completion Report

Primero Operating, Inc. Dulce Draw State #1 1980' FNL, 660' FWL Sec 2 T4S, R9E, Socorro County, NM

### Completion Day 10

SICP – 0. Rig up WRH reverse unit. TIH with 8  $\frac{3}{4}$ " bit, 6 - 4  $\frac{3}{4}$ " drill collars and 38 joints of tubing. Tag cement retainer @ 1,330' Drilling on retainer with ~15 points. Retainer came loose in 2  $\frac{1}{2}$  hours of drilling. Pushed remainder of retainer under perforations to 3,090'. TOH with tubing. SIWFN.

WH Rentals		\$2	,650
Key Energy		\$ 1	,750
Supervision		\$	570
T&C tank		\$	100
Gandy Services		\$	800
-	Total	\$5,870	

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Estimated Cumulative cost \$681,524

Morris Keith

July 26, 2001 Well Completion Report

Primero Operating, Inc. Dulce Draw State #1 1980' FNL, 660' FWL Sec 2 T4S, R9E, Socorro County, NM

Completion Day 11

SICP – 0. Lay down drill collars. PU retrievable bridge plug. Set RBP with tubing @ 3,010. Test plug to 650 psi for 15 minutes. Spot 5 sacks sand on top of plug. Swab fluid level in casing to 1900 fet from surface. TOOH with tubing. Prepare to perforate @ 6:30 AM Friday morning

WH Rentals		\$ 1,450
Key Energy		\$ 2,550
Supervision		\$ 570
T&C tank		\$ 100
Weatherford		\$ 800
	Total	\$ 5,470

Estimated Cumulative cost

\$686,994

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Morris Keith

July 27, 2001 Well Completion Report

Primero Operating, Inc. Dulce Draw State #1 1980' FNL, 660' FWL Sec 2 T4S, R9E, Socorro County, NM

**Completion Day 12** 

SICP - 0. RU Schlumberger with pack-off and lubricator to perforate. Measured fluid level 1700' from surface. Perforate 4 jspf with casing guns @ 2,832 – 2,846. TIH with Weatherford packer. Set packer @ 2,795. SN @ 2,790'. Start swabbing. Initital fluid level 1700' from surface. (1,090' from SN

	Fluid level from SN	# of runs	total fluid recovered
11:00 AM - 12Noor	n 1090	3	16 bbls 9.1# brine
12Noon - 1:00 PM	1000	4	16 bbls 9.1# brine
1:00 PM - 2:00 PM	700	3	12 bbls 9.1# brine
2:00 PM-3:00 PM	6 <b>00</b>	4	10 bbls 9.1# brine
3:00 PM - 4:00 PM	650	3	10 bbls 9.1# brine
4:00 PM - 5:00 PM	600	2	10 bbls 9.1# brine
		ブチト	the total

74 bbls total

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SIFN. Will check WHP and test gas to burn @ 9:00 AM Saturday. Resume swabbing Monday morning.

Schlumberger		\$ 4,765
WH Rentals		\$ 100
Key Energy		\$ 2,800
Supervision		\$ 570
T&C tank		\$ 100
Weatherford		\$ 2360
	Total	\$11,135

Estimated Cumulative cost

\$698,129

Montes Keith

July 28, 2001 Well Completion Report

Primero Operating, Inc. Dulce Draw State #1 1980' FNL, 660' FWL Sec 2 T4S, R9E, Socorro County, NM

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Completion Day 13

SITP – 0 Shut down for Saturday

WH Rentals	\$ 100
T&C tank	100

Total \$200

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Estimated Cumulative cost \$698,329

Morris Keith

July 29, 2001 Well Completion Report

Primero Operating, Inc. Dulce Draw State #1 1980' FNL, 660' FWL Sec 2 T4S, R9E, Socorro County, NM

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Completion Day 14

SITP – 0 Shut down for Sunday

WH Rentals	\$ 100
T&C tank	\$ 100

Total \$200

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Estimated Cumulative cost \$698,529

Morris Keith 505-910-4926

July 30, 2001 Well Completion Report

Primero Operating, Inc. Dulce Draw State #1 1980' FNL, 660' FWL Sec 2 T4S, R9E, Socorro County, NM

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Completion Day 15

SITP - 0. Swab test

Flu	id level from SN	# of runs	total fluid recovered
9:00 AM - 10:00 AM	500	2	7 bbls 9.1# brine
10:00 AM - 11:00 AM	600	3	10 bbls 9.1# brine
11:00 AM – 12Noon	600	4	13 bbls 9.1# brine
12Noon - 1:00 PM	600	2	7 bbls 9.1# brine
1:00 PM – 2:00 PM	600	4	13 bbls 9.1# brine
2:00 PM – 3:00 PM	600	4	13 bbls 9.1# brine
3:00 PM - 4:00 PM	600	4	13 bbls 9.1# brine
4:00 PM - 5:00 PM	600	4	13 bbls 9.1# brine
		90 b	bls total

Took gas sample from gas cut swab run tails to Wildcat Measurement for analysis. Water analysis –

80 4 4	
SG – 1.1	pH 6.68
Iron – 23 ppm	CI – 79710 ppm
K – 450 ppm	Sulfates – 2219
BiCarb – 468 ppm	TH 9058
Ca – 2899	Mg - 435
	Na - 48990

SIFN. Tuesday - plan to move tools and test sand @ 2,642 - 2,650.

\$	100
\$ 2	2,300
\$	770
\$	100
\$	300
	\$ \$ \$

Total \$3,570

Estimated Cumulative cost \$702,100

July 31, 2001 Well Completion Report

Primero Operating, Inc. Dulce Draw State #1 1980' FNL, 660' FWL Sec 2 T4S, R9E, Socorro County, NM

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**Completion Day 16** 

SITP - 0.

Yesterday's gas sample from gas cut swab run tails tested 80.85% CO2, 19.15% N2. Hard copy to Primero's office.

Third rig crew member arrive @ 11:30 AM. TOOH with packer. TIH with retrieving tool. Circulate sand off of RBP. Retrieving tool would not catch fishing neck. TOOH with tool. Weatherford to modify tool and re- run in the morning. SIFN. Wednesday – plan to perforate@ noon, test sand @ 2,642 – 2,650.

WH Rentals		\$	100
Key Energy		\$2	,300
Supervision		\$	570
T&C tank		\$	100
Dowell-Schlumberge	r	\$4	,200
Weatherford		<b>\$</b> 1	,540
702100	<b>F</b> otal	\$8	,810

Estimated Cumulative cost \$710,910

Morris Keith

August 1, 2001 Well Completion Report

Primero Operating, Inc. Dulce Draw State #1 1980' FNL, 660' FWL Sec 2 T4S, R9E, Socorro County, NM

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**Completion Day 17** 

SITP - 0.

Monday's gas sample from gas cut swab run tails tested 80.85% CO2, 19.15% N2. Hard copy to Primero's office.

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Rig diesel engine would not throttle properly. Key mechanic from Hobbs determined computer technician necessary. Plan to repair rig Thursday and resume operations Friday. Friday - plan to move tools, perforate, test sand @ 2,642 – 2,650.

WH Rentals	\$	100
Key Energy	\$	0
Supervision	\$	570
T&C tank	\$	100
Dowell-Schlumberger	\$	400
Weatherford	\$	600
00 Tot	~ ~ 4	770

702100 Total \$1,770

Estimated Cumulative cost \$712,680

Morris Keith

August 2, 2001 Well Completion Report

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Primero Operating, Inc. Dulce Draw State #1 1980' FNL, 660' FWL Sec 2 T4S, R9E, Socorro County, NM

**Completion Day 18** 

SITP – 0.

Repair rig. Friday - plan to move tools, perforate, test sand @ 2,642 - 2,650.

WH Rentals	\$ 100
Key Energy	\$ 1,000
Supervision	\$ 570
T&C tank	\$ 100

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712680 Total \$1,770

Estimated Cumulative cost \$714,450

Morris Keith 505-910-4926

August 3, 2001 Well Completion Report

Primero Operating, Inc. Dulce Draw State #1 1980' FNL, 660' FWL Sec 2 T4S, R9E, Socorro County, NM

**Completion Day 19** 

SITP - 0.

Circulate tubing. Retrieve bridge plug. Had to work it over four hours. (Pulled 80K) TOOH. Minor rubber damage. No obvious visual reason for trouble. Saturday plans – set cement plug over bottom two zones (Dowell). Monday – swab fluid level to 2,000'. Next zone to test - 2642 – 2,650.

WH Rentals	\$ 100
Key Energy	\$ 2,400
Supervision	\$ 570
T&C tank	\$ 100
Weatherford	\$ 2,350

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Total \$ 5,520

### Estimated Cumulative cost \$719,970

Morris Keith

August 4, 2001 Well Completion Report

Primero Operating, Inc. Dulce Draw State #1 1980' FNL, 660' FWL Sec 2 T4S, R9E, Socorro County, NM

Completion Day 20

SITP - 0.

RU Dowell. Via tubing spot 50 sack cement plug from 3090 to 2,950. Spot 50 sack cement plug from 2,900 to 2,750. TOOH. WOC three hours. TIH with seating nipple and tubing. Tag hard cement plug @ 2,790'. Set back 10 stands, secure well and SI for weekend. Plan to swab fluid level to 2,000' Monday and perforate 2,642-2,650 @ 2:00 PM.

WH Rentals	\$ 100
Key Energy	\$ 2,000
Supervision	\$ 570
T&C tank	\$ 100
Weatherford	\$ 6,538

Total \$ 9,308

Estimated Cumulative cost \$729,278

Morris Keith

August 5, 2001 Well Completion Report

Primero Operating, Inc. Dulce Draw State #1 1980' FNL, 660' FWL Sec 2 T4S, R9E, Socorro County, NM

Completion Day 21

SITP - 0.

Shut down for Sunday

\$ 100
\$ 7,000 adjustment
\$
\$
\$

Total \$7,100

Estimated Cumulative cost \$736,378

Morris Keith 505-910-4926

August 6, 2001 Well Completion Report

Primero Operating, inc. Dulce Draw State #1 1980' FNL, 650' FWL Sec 2 T4S, R9E, Socorro County, NM

Completion Day 22

SITP-0.

Swab fluid level to 1,450'. Rig up Schlumberger to perforate 4 jspf 60° phasing from 2,642' – 2,650'. 32 shots total. No blow when shot. Start IH with packer and tubing SD for dark. Swab test tomorrow.

WH Rentals	\$ 100
Key Energy	\$ 2,900
Supervision	\$ 570
T&C tank	\$ 100

Total \$3,670

Estimated Cumulative cost \$740,048

Morris Keith

August 7, 2001 Well Completion Report

Primero Operating, Inc. Dulce Draw State #1 1980' FNL, 660' FWL Sec 2 T4S, R9E, Socorro County, NM

**Completion Day 23** 

SITP - 0.

Set packer @ 2,611'. RU up swab line. Initial fluid level - 1600' Swab test -

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1000' 8:00 AM - 9:00 AM 3 runs 10 bbls won't burn 9:00 AM - 10:00 AM 4 runs 700' 10 bbls 10:00 AM - 11:00 AM 3 runs 600' 7 bbls 11:00 AM - 12:00 AM 3 runs 500' 7 bbls won't burn 12:30 PM - 1:00 PM 2 runs 400' 3 bbis won't burn 1:00 PM - 2:00 PM 4 runs 400' 7 bbls won't burn catch gas samples - sent to Wildcat Measurement 2:00 PM - 3:00 PM 350' 6 bbls won't burn 4 runs 3:00 PM - 4:00 PM 250' possibly 3 runs 5 bbls detect 6" lazy flare after swab run. Aerated fluid would not burn 4:00 PM - 5:00 PM 200' 5 runs 3 bbls possibly detect intermittent 6" lazy flare after swab run. 125' 5:00 PM - 6:00 PM 4 runs 2 bbls possibly detect intermittent 6" lazy flare after swab run. 35 runs total 64 bbls total

water – 1.1 SG formation saltwater. Sample sent to BJ Artesia lab.

Leave tubing SI overnight. Will report SITP @ 6:30 AM.

WH Rentals	\$ 100
Key Energy	\$ 2,900
Supervision	\$ 570
T&C tank	\$ 100
Wildcat Measurement	\$ 100
Weatherford – final	6,250
Total	\$ 10,020

Estimated Cumulative cost \$750,068

Morris Keith

Primero Operating Co. Dulce Draw St #1 Sec 2 T4S R9E Socorro County, NM

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### **NMOCD Plugging Instructions**

Per: Roy Johnson Direct -- 505-476-3470 Cell -- 505-690-2365 Office --

"No casing recovered option"

3 - 50' cement plugs over each Abo perforated interval 60 sacks Class C

100' plug @ 1,900' – 2,000' (9 5/8" TOC)

40 sacks Class C

10 sacks Class C

perforate 9 5/8" @ 1283'. Place 100' plug from 1233' - 1333' 90 sacks Class C

10 sacks at surface with dry hole marker.

Total cement - 200 sacks Class C

Brine water/saltwater gel in between plugs - 200 bbls x 15#/bbl = 3,000# gel

Fresh water for cement mixing water - 30 bbls.

Casing strings – 13 3/8" @ 1283'. Cement top – 480'. 9 5/8" 3,445 to surface. Cement top – 1,965' Cost estimate for one day plugging procedure. Does not include hauling for tubing and wellhead - \$10,200. Log tops: Glorietta – 491 previous plug – 25 sacks @ \_\_\_\_\_ Yeso – 785 cement retainer @ 3097' Yeso Anhydrous – 912 CIBP @ 3,390' Abo – 2214 Penn SS – 3803 Pre-Cambrian – 3954 TD – 4022 August 8, 2001 Well Completion Report

Primero Operating, Inc. Dulce Draw State #1 1980' FNL, 660' FWL Sec 2 T4S, R9E, Socorro County, NM

### Completion Day 24

SITP - 200 psi. Open well on various choke sizes. Diffused gas flow. Would not burn. Caught gas sample @ 150 psi. Sent to Wildcat Measurement lab. Blew down in 10 minutes on 10/64" choke. Release packer and TOOH. TIH to set cement plug. Set 60 sack Class C plug from 2,700' to 2,550'. TOH with tbg. Rig up wireline and perforate 4 squeeze holes @ 1,283' TIH with tubing, tag hard cement plug @ 2,590'. Load casing with brine water carrying 20# bbl salt water gel. Spot 100' cement plug with 40 sacks Class C cement from 2,000' to 1,900'. Spot 90 sack Class C cement plug from 1,333' to 1,233'. Close 9 5/8" on last 5 bls of spot to insure cement is forced into annulus. Spot 10 sack plug on surface. Filled mouse hole with 10 sacks. Left 10 sacks dry cement next to cellar. TOH with tubing. 106 joints 2 7/8" J-5 tubing is stacked on location. Wellhead is stacked next to tubing. Barton 2 9/16" valve and adjustable choke is stacked on tubing. ND BOP and load on trailer. Release BOP, TIW, matting boards (Bill Hanson). Release T&C tank (Rooster) Spot 10 sack cement plug in top 30' of casing. Secure well. Phil Whiler (746-4347) is building marker in his shop and is scheduled to weld on dry hole marker Saturday. Steve Gore (648-2041) is scheduled to fill in cellar Tuesday.

WH Rentals		\$ 100
Key Energy		\$ 2,900
Supervision		\$ 570
T&C tank		\$ 100
Wildcat Measureme	ent	\$ 100
BJ Services		\$ 6,438
Gandy water		\$ 1,400
Rotary wireline		\$ 1,670
750068	Total	\$ 13,278

Estimated Cumulative cost \$763,346

Morris Keith

08/09/01

Primero Operating Dulce Draw St #1 Inventory on location

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106 joints 2 7/8" J-55 tbg.
9 5/8" Larkin wellhead with ring for 2 7/8" tubing slips.
Changeover flange makeup
2 9/16" Barton valve
2" adjustable choke, heavy 2" tee, 2"tapped bullplug, 2" X 2 ½" swage, heavy 2" nipple
600 psi and 2,000 psi gauge

	State of New Me			Form C-	
District I 1625 N. French Dr., Hobbs, NM 88240	Energy, Minerals and Natu	aral Resources	WELL API NO.	Revised March 25,	1999
District II 811 South First, Artesia, NM 88210	OIL CONSERVATION	DIVISION	30-053-20014		
District III	1220 South St. Fra	- 1	5. Indicate Type		
1000 Rio Brazos Rd., Aztec, NM 87410 District IV	Santa Fe, NM 8	7505	STATE 2 6. State Oil & G		
1220 S. St. Francis Dr., Santa Fe, NM 87505	, ,		0. State Off & O	las Lease 140.	
SUNDRY NOTIO	CES AND REPORTS ON WELLS			or Unit Agreement	
(DO NOT USE THIS FORM FOR PROPOSA DIFFERENT RESERVOIR. USE "APPLICA			Name: Dulce Draw State	5	
PROPOSALS.) 1. Type of Well:	·		Duice Diaw State	•	
Oil Well Gas Well X	X Other				
2. Name of Operator			8. Well No. 1		
Primero Operating, Inc. 3. Address of Operator			8. Pool name or	Wildeat	
PO Box 1433, Roswell, NM 88202	-1433		Wildcat, Atoka	W hquat	
4. Well Location					
Unit Letter E :	1980 feet from the North	line and 66	) feet from	m the West	line
			NMPM		
Section 2	Township 4S 10. Elevation (Show whether D	Range 9E		Socorro County	
	4036.8				
	ppropriate Box to Indicate N				
NOTICE OF IN			EQUENT REI		. – r
		REMEDIAL WORK		ALTERING CASIN	IG L
		COMMENCE DRIL	LING OPNS.	PLUG AND	×
		CASING TEST AN		ABANDONMENT	
OTHER:			an Onerationa		Г
12. Describe proposed or complete		OTHER: Complet		including estimated	L dat
	SEE RULE 1103. For Multiple				
Plugged well as follows:					
Plug #1 60 sx class C 2700' to 255	50'				
Peforate 4 squeeze holes at 1283', H		2590'			
Peforate 4 squeeze holes at 1283', H Plug #2 40 sx class C - 2000' to 1	900'	2590'			
Peforate 4 squeeze holes at 1283', H	900'	2590'			
Peforate 4 squeeze holes at 1283', H Plug #2 40 sx class C - 2000' to 1 Plug #3 90 sx class C - 1333' to 1 Plug #4 10 sx class C at surface.	900' 233'	2590'			
Peforate 4 squeeze holes at 1283', H Plug #2 40 sx class C - 2000' to 1 Plug #3 90 sx class C - 1333' to 1	900' 233'	2590'	T.158'	( _	
Peforate 4 squeeze holes at 1283', H Plug #2 40 sx class C - 2000' to 1 Plug #3 90 sx class C - 1333' to 1 Plug #4 10 sx class C at surface.	900' 233'	2590'	Iusp	oz Dol	
Peforate 4 squeeze holes at 1283', H Plug #2 40 sx class C - 2000' to 1 Plug #3 90 sx class C - 1333' to 1 Plug #4 10 sx class C at surface.	900' 233'	2590'	Iusp' 4/"l	ok Ref	
Peforate 4 squeeze holes at 1283', H Plug #2 40 sx class C - 2000' to 1 Plug #3 90 sx class C - 1333' to 1 Plug #4 10 sx class C at surface. Welded on dry hole marker and clea	900' 233' aned and leveled location.			ok Ref	_
Peforate 4 squeeze holes at 1283', H Plug #2 40 sx class C – 2000' to 1 Plug #3 90 sx class C – 1333' to 1 Plug #4 10 sx class C at surface. Welded on dry hole marker and clear I hereby certify that the information	900' 233' aned and leveled location.			ok Ref	
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Peforate 4 squeeze holes at 1283', H Plug #2 40 sx class C – 2000' to 1 Plug #3 90 sx class C – 1333' to 1 Plug #4 10 sx class C at surface. Welded on dry hole marker and clear I hereby certify that the information SIGNATURE Type or print name Phelps Wh (This space for State use)	900' 233' aned and leveled location.  above is true and complete to the	e best of my knowled President	ge and belief. Tele <b>PERVISOR</b>	DATE11/29 phone No. 505.622 DATE 4//7/4	_
Peforate 4 squeeze holes at 1283', H Plug #2 40 sx class C – 2000' to 1 Plug #3 90 sx class C – 1333' to 1 Plug #4 10 sx class C at surface. Welded on dry hole marker and clear I hereby certify that the information SIGNATURE Type or print name Phelps Wh (This space for State use)	900' 233' aned and leveled location.  above is true and complete to the	e best of my knowled President	ge and belief. Tele <b>PERVISOR</b>	DATE11/29 phone No. 505.622 DATE 4//7/4	_
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Submit To Appropriate State Lease - 6 copies	District Office	En	State of New M y, Minerals and Na					Detrice	Form C-105 i March 25, 1999
Fee Lease - 5 copies District I		لمالار د	y, minerals and ma	aturai nest	unces	WELL API	NO.	Kevised	I IVIAICII 23, 1999
1625 N. French Dr., He District II	obbs, NM 88240		Oil Conservation	Division		30-053-200			
811 South First, Artesi	I, NM 88210		1220 South St. Fr	ancis Dr.		5. Indicate	Type of Le	ase	
District III 1000 Rio Brazos Rd., /	Aztec, NM 87410		Santa Fe, NM	87505		STA		FEE 🗖	
District IV 1220 S. St. Francis Dr.	Santa Fe NM 8750	,				State Oil &	Gas Lease	No.	
the second s			PLETION REPO	RTAND	OG			3.5	
1a. Type of Well:		LL C DRY C	OTHER			7. Leas	e Name or Un	it Agreement	Name
b. Type of Comple NEW	tion: WORK	PLUG	CT DIFF.			Dulce Draw Sta	te		
WELL WELL		EPEN BACK		THER					
2. Name of Operator Primero Operating, 1						8. Wel	l No.		1
3. Address of Operat	tor						name or Wild	lcat	
PO Box 1433, Rosv 4. Well Location	ell, NM 88202-1	433				Wildcat, A	toka		·····
	_E:19	80 Feet From T	TheNorth	Line and	660	Feet	From The	_West	Line
Section	2			Range 9E		NMPM	Socorro	······	County
10. Date Spudded	10. Date Reac		e Compl. (Ready to Prod.)		evations (DF 8, GR	& RKB, RT, GR,	etc.)   1	4. Elev. Casi	nghead
4-22-2001 15. Total Depth	5-12-01 16. Phug	1 Back T.D. [1]	7. If Multiple Compl. How	Many	18. Intervals	Rotary Tools	<u>L</u>	Cable Tools	<u> </u>
4030'	Surface		Zones?		Drilled By	0 - 4030'			
19. Producing Interv	val(s), of this comp	letion - Top, Bottom,	Name		<u></u>		20. Was Yes	s Directional :	Survey Made
21. Type Electric an NGR Specroscopy, CBL			, HR Laterolog Array/NG7	Γ, ECS, Dual E	urst TDT,	21. Wa No	as Well Cored		
23.		CASI	NG RECORD (Rep	ort all string	es set in w	_1 ell)			
CASING SIZE	WEI	HT LB./FT.	DEPTH SET	HOL	E SIZE	CEMENTING		AMO	UNT PULLED
13 3/8		54.5	<u> </u>		1/2	300			0
9 5/8		36	3437		. 1/4	800	SX		
24			LINER RECORD		2		UBING RE		
SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN	S	ZE	DEPTH SE	<u>T</u> P/	ACKER SET
26. Perforat	ion record (intervi	I, size, and number)	l	27. ACII	, SHOT, FI	RACTURE, CE	MENT, SOL	JEEZE, ET	<u>C.</u>
3064 - 3074,				DEPTHIN	TERVAL	AMOUNT AN	ND KIND MA	TERIAL US	
2832-2864, 29 2642 - 2650,				3064 - 3	074	28 bbls 7 1/2	2% NEFE a	<u>icid</u>	
			TRAT	UCTION					
28 Date First Production	n	Production Method	FROD (Flowing, gas lift, pumpir		pe pump)		Prod. or Shut	-in)	
						P and A			
Date of Test	Hours Tested	Choke Size	Prod'n For Test Period	Oil - Bbl	G	as - MCF	Water - Bbl	. G	as - Oil Ratio
Flow Tubing Press.	Casing Pressure	Calculated 24- Hour Rate	Oil - Bbl.	Gas - N	ICF	Water - Bbl.	Oil Gra	avity - API - (	(Corr.)
				[		···	Test Witnesse	<del></del>	
29. Disposition of G		juei, veniea, eic.)			<u>.                                    </u>			ш Бу 	
	Three Detector LI		, HR Laterolog Array/NG]						
31 .I hereby certij	that the infor	mation shown on t	both sides of this form	as true and c	omplete to	the best of my k	nowledge an	d belief	
Signature	1=	~~~~~	Printed Name Phel	ps White	т	itle Presider	nt	Date	12/6/01
	/								

District I 1625 N. French Dr., Hobbs, NM 88240	3.61 1 131	exico		Form C-1
1020 N. French Dr., Hobbs, NM 88240	Energy, Minerals and Nati	ural Resources	NUELT ADTATO	Revised March 25, 19
District II			WELL API NO.	
811 South First, Artesia, NM 88210	OIL CONSERVATION	N DIVISION	30-053-20014	ofloggo
District III	1220 South St. Fra	incis Dr.	5. Indicate Type	
1000 Rio Brazos Rd., Aztec, NM 87410	Santa Fe, NM 8		STATE	the second s
District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505	Santa I V, IVIVI U		6. State Oil & O	jas Lease No.
	CES AND REPORTS ON WELL	S	7. Lease Name	or Unit Agreement
(DO NOT USE THIS FORM FOR PROPOS. DIFFERENT RESERVOIR. USE "APPLICA PROPOSALS.) 1. Type of Well:	ATION FOR PERMIT" (FORM C-101) FC		Name: Dulce Draw Stat	-
Oil Well Gas Well X	CX Other			
2. Name of Operator			8. Well No. 1	
Primero Operating, Inc.			0 D 1	Wildoot
3. Address of Operator	1422		8. Pool name of	wildcat
PO Box 1433, Roswell, NM 88202 4. Well Location	~1433		Wildcat, Atoka	
Unit Letter_E Section 2	_1980feet from the North Township 4S	Range 9E	NMPM	m the Westli Socorro County
	10. Elevation (Show whether L		etc.)	
	4036.8			
	ppropriate Box to Indicate N			
NOTICE OF IN			BSEQUENT <u>R</u> E	
	PLUG AND ABANDON 🔲	REMEDIAL WO	RK 🗆	ALTERING CASING
			RILLING OPNS.	PLUG AND ABANDONMENT
PULL OR ALTER CASING		CASING TEST		
OTHER:		OTHER: Comp	etion Operations	
12 Describe proposed or complete	ed operations. (Clearly state all pe	ertinent details, and	give pertinent dates	including estimated d
	. SEE RULE 1103. For Multiple		ach wellbore diagram	
of starting any proposed work), or recompilation. 7/16/01: Perforate 9 5/8" casing with 4 holes 7/18/01: Set Cement Retainer at 3097' and se 7/20/01: Perforate 3064' to 3074' w/4 spf. 1	at 3118'. queezed well with 400 sacks Super C type of RIH w/ packer and Acidize perforations with average rate of 400 Mcfd, gas would not be IH and set Packer at 2,795 and start swabbi to 2950', WOC 3 hours and tag top of plug a then perforated 2,642 to 2,650' w/ 4 spf.	completion cement h 28 bbls 7 ½% acid. um. Analysis CO2- 26.5 ing well, swabbed Salt w at 2790'	98%, O2544%, N2 – 70 ater and non-burnable gas	n of proposed completi .41%, Hydrocarbons 2.04%
of starting any proposed work), or recompilation. 7/16/01: Perforate 9 5/8" casing with 4 holes 7/18/01: Set Cement Retainer at 3097' and sa 7/20/01: Perforate 3064' to 3074' w/ 4 spf. J Flowed well from 7/20 to 7/24 at an 7/26/01: Set CIBP at 3010' 7/27/01: Perforate 2,832 – 2,846 w/ 2 spf. R CO2 – 80.85%, N2 – 19.5% 8/04/01: Spot 50 sx cemnt plug from 3090' to 8/06/01: Swabbed fluid level down to 1450' 1 8/07/01: Set packer at 2,611' and start swabb 8/08/01: POOH w/ packer	A SEE RULE 1103. For Multiple at 3118'. queezed well with 400 sacks Super C type of RIH w/ packer and Acidize perforations with average rate of 400 Mcfd, gas would not b IH and set Packer at 2,795 and start swabbi to 2950', WOC 3 hours and tag top of plug a then perforated 2,642 to 2,650' w/ 4 spf. bing well. Swabbed well for 1 ½ day record	completion cement h 28 bbls 7 ½% acid. urn. Analysis CO2- 26.5 ing well, swabbed Salt w at 2790' vering Salt water cat will e best of my knowle	98%, O2544%, N2 – 70 ater and non-burnable gas h non-burnable gas.	n of proposed completi .41%, Hydrocarbons 2.04% for two days, Gas analysis
of starting any proposed work), or recompilation. 7/16/01: Perforate 9 5/8" casing with 4 holes 7/18/01: Set Cement Retainer at 3097' and se 7/20/01: Perforate 3064' to 3074' w/ 4 spf. J Flowed well from 7/20 to 7/24 at an 7/26/01: Set CIBP at 3010' 7/27/01: Perforate 2,832 – 2,846 w/ 2 spf. R CO2 – 80.85%, N2 – 19.5% 8/04/01: Spot 50 sx cemnt plug from 3090' to 8/06/01: Swabbed fluid level down to 1450' f 8/07/01: Set packer at 2,611' and start swabb 8/08/01: POOH w/ packer	A SEE RULE 1103. For Multiple at 3118'. queezed well with 400 sacks Super C type of RIH w/ packer and Acidize perforations with average rate of 400 Mcfd, gas would not b IH and set Packer at 2,795 and start swabbi to 2950', WOC 3 hours and tag top of plug a then perforated 2,642 to 2,650' w/ 4 spf. bing well. Swabbed well for 1 ½ day record	Completions: Att ompletion cement h 28 bbls 7 1/2% acid. urn. Analysis CO2- 26.5 ing well, swabbed Salt w at 2790' vering Salt water cut will	98%, O2544%, N2 – 70 ater and non-burnable gas h non-burnable gas.	n of proposed completi .41%, Hydrocarbons 2.04%
of starting any proposed work), or recompilation. 7/16/01: Perforate 9 5/8" casing with 4 holes 7/18/01: Set Cement Retainer at 3097' and sa 7/20/01: Perforate 3064' to 3074' w/ 4 spf. J Flowed well from 7/20 to 7/24 at an 7/26/01: Set CIBP at 3010' 7/27/01: Perforate 2,832 – 2,846 w/ 2 spf. R CO2 – 80.85%, N2 – 19.5% 8/04/01: Spot 50 sx cernnt plug from 3090' to 8/06/01: Swabbed fluid level down to 1450' 1 8/07/01: Set packer at 2,611' and start swabb 8/08/01: POOH w/ packer	A SEE RULE 1103. For Multiple at 3118'. queezed well with 400 sacks Super C type of RIH w/ packer and Acidize perforations with average rate of 400 Mcfd, gas would not b IH and set Packer at 2,795 and start swabbi to 2950', WOC 3 hours and tag top of plug is then perforated 2,642 to 2,650' w/ 4 spf ying well. Swabbed well for 1 ½ day records a above is true and complete to the 	completion cement h 28 bbls 7 ½% acid. urn. Analysis CO2- 26.5 ing well, swabbed Salt w at 2790' vering Salt water cat will e best of my knowle	98%, O2544%, N2 – 70 ater and non-burnable gas h non-burnable gas.	n of proposed completi .41%, Hydrocarbons 2.04% for two days, Gas analysis

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<b>B J Servic</b> Artesia		Laboratory	S	
Date: 21-Jul-01 Company: Primbro Operating Lease: Dulce Draw State: NM Depth:	Test #: Well #: County: Formation: Source:	14-Apr State #1 Socorro Grab		
pH 5.98 Specific Gravity 1.080		Temp (F):	86	
CATIONS Sodium (calc.) Calcium Magnesium Barium Potassium Iron ANIONS Chloride	<b>mg/l</b> 47522 7419 1458 < 25 < 10 231	2067.1 370.2 120.0  8.3	<b>ppm</b> 44001 6869 1350  214 83333	
Sulfate Carbonate Bicarbonate	231 < 1 1830 148691	30.0	214  1694 137677	
Total Dissolved Solids(calc.) Total Hardness as CaCO3 <u>COMMENTS:</u>	24529		22712	
		nate Scale Probabi e Scale Probability		Probable Remote
60 50 40 30		f Plot 00 10 20	30 40 s	50 60

n

• 4

Primero Operating, Inc. Dulce Draw St#1 Sec 2 T4S R9E Socorro County, NM 20" CONDUCTOR C 25' TOC- 430'(133/8") 171/2"Hove to 858' 143/4" hole to 1326' 133/8" 54.5# J-55 CSG e 1283' \_\_\_\_\_\_\_\_\_\_ Joc \_\_\_\_\_\_\_ 300 sks cement. 95/8"\_\_\_\_\_ - Cement retainer @ 3097' 4 shots @ 3,118 . CIBP 35 sk ent plug. 

08/09/01

Primero Operating Dulce Draw St #1 Inventory on location

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106 joints 2 7/8" J-55 tbg.
9 5/8" Larkin wellhead with ring for 2 7/8" tubing slips.
Changeover flange makeup
2 9/16" Barton valve
2" adjustable choke, heavy 2" tee, 2"tapped bullplug, 2" X 2 ½" swage, heavy 2" nipple
600 psi and 2,000 psi gauge

COMPANY	Prime	ro Oper	ating	Con	npany		
WELL:	Dulce	Draw S	tate N	0.1			
FIELD:	Wildca	at					Total Colorida Comments
COUNTY:	Socor	ro	STA	TE:	New M	exico	
r FWL 6 No. 1 g Company	Schlu	nberger	D	ECAY	RST THER TIME LOG A RAY / CC	ì	
Socorro Wildcat 1980' FNL & 660' FWL Dulce Draw State No. 1 Primero Operating Cor LOCATION	1980' FNL &	<b>A A A A A</b>	IDENT	AL	Elev.: K.B. G.L. D.F.	5972 ft 5961 ft 5971 ft	
	Permanent D Log Measure Drilling Meas	d From: <u>k</u>	Around Leve Kelly Bushing Kelly Bushing	1	Elev.: <u>5961</u>		-
COUNTY: Field: Location: Well: Company:		erial No. i3-20014	1	TION 2	TOWNSHIP 4S	RANGE 9E	
Logging Date Run Number Depth Driller Schlurnberger Dep	th	31-MAY-2001 One 3456 ft 3390 ft					
Bottom Log Interval Top Log Interval Casing Fluid Type	J	3381 ft 2000 ft Brine	· · · · · · · · · · · · · · · · · · ·				
Salinity Density Fluid Level BIT/CASING/TUB		100000 ppm 8.8 lbm/gai					
Bit Size From To		11.000 in					
Casing/Tubing Size Weight Grade	•	9.625 in 36 lbm/ft					
From To Maximum Recorde							
Logger On Bottom Unit Number Recorded By	Location		swell, N.M.	13:30			

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### BEN DONEGAN 3224 CANDRIARIA NE ALBUQUERQUE, NEW MEXICO 87107

505 884-2780

November 13, 2002

### RECEIVED

NUV 1 4 2002

### OIL CONSERVATION DIVISION

Director Oil, Gas and Minerals Division New Mexico State Land Office 310 Old Santa Fe Trail Santa Fe, NM 87501

Director New Mexico Oil Conservation Division 1220 South St. Francis Drive Santa Fe, NM 87504

Re: Subsequent Joinder to the Cat Head Mesa Unit Agreement

Ladies and Gentlemen:

Enclosed are original and one copy of the Ratification and Joinder to the Cat Head Mesa Unit Agreement executed by royalty interest owner Carl L. Johnson. All of the working interest owners of the Cat Head Mesa Unit Agreement have approved the Carl L. Johnson Joinder to the unit agreement.

This additional commitment of royalty interest to the unit agreement combined with the previously committed interests and the state and federal royalty interests comprise 99.660406 per cent of the total oil and gas interests in the unit area.

Copies of the Joinder are also being mailed to the Bureau of Land Management at Roswell.

Very truly yours,

Primero Operating, Inc. Unit Operator

1De

By:

Ben Donegan, Agent

BD/nn encl.

### RATIFICATION AND JOINDER OF UNIT AGREEMENT

In consideration of the execution of the Unit Agreement for the Development and Operation of the Cat Head Mesa Unit Area, County of Socorro, State of New Mexico, dated November 1, 2001, in form approved on behalf of the Secretary of the Interior, the undersigned (whether one or more) hereby expressly joins said Unit Agreement and ratifies, approves, adopts, and confirms said Unit Agreement as fully as though the undersigned had executed the original agreement.

This Ratification and Joinder shall be effective as to the undersigned's interests in any lands and leases, or interests therein, and royalties presently held or which may arise under existing option agreements or other interests in unitized substances, covering any lands within the Unit Area the undersigned may be found to have an oil or gas interest.

This Ratification and Joinder of Unit Agreement, shall be binding upon the undersigned, his, her or its heirs, devisees, executors, assigns or successors.

EXECUTED this 16 day of lipin, 2002
By Carl Johnson
Address: Day 917
Jotim Mar
INDIVIDUAL ACKNOWLEDGMENT 8826
STATE OF $\underline{M}$ (SECOUNTY OF $\underline{Z}$ ) SEC
This instrument was acknowledged before me on 16 April, 2002
by Carl Johnson.
My Commission Expires: <u> </u>
CORPORATE ACKNOWLEDGMENT
STATE OF)
88.
COUNTY OF)
This instrument was acknowledged before me on, 2001
by as of
My Commission Expires:
Notary Public

11-14-01

### RATIFICATION AND JOINDER OF UNIT AGREEMENT

In consideration of the execution of the Unit Agreement for the Development and Operation of the Cat Head Mesa Unit Area, County of Socorro, State of New Mexico, dated November 1, 2001, in form approved on behalf of the Secretary of the Interior, the undersigned (whether one or more) hereby expressly joins said Unit Agreement and ratifies, approves, adopts, and confirms said Unit Agreement as fully as though the undersigned had executed the original agreement.

This Ratification and Joinder shall be effective as to the undersigned's interests in any lands and leases, or interests therein, and royalties presently held or which may arise under existing option agreements or other interests in unitized substances, covering any lands within the Unit Area the undersigned may be found to have an oil or gas interest.

This Ratification and Joinder of Unit Agreement, shall be binding upon the undersigned, his, her or its heirs, devisees, executors, assigns or successors.

EXECUTED this 16 th day of April, 2002. By Saif Address: Box 917 Tatum, M Mex. 88267 INDIVIDUAL ACKNOWLEDGMENT state of <u>M</u> county of <u>Lu</u> 88. This instrument was acknowledged before me on 16 April, 2002. by Carl Johnson My Commission Expires: 63/2003 CORPORATE ACKNOWLEDGMENT STATE OF 88. COUNTY OF \_\_\_\_ This instrument was acknowledged before me on \_\_\_\_\_, 2001 \_\_\_\_\_ as \_\_\_\_\_ of \_\_\_\_\_ by \_\_\_\_ My Commission Expires:

Notary Public

11-14-01

### **BEN DONEGAN** 3224 CANDBLARIA NE ALBUQUERQUE, NEW MEXICO 87107

RECEIVED NOV 1 5 2002

OIL CONSERVATION

DIVISION

505 884-2780

November 14, 2002

Director Oil, Gas and Minerals Division New Mexico State Land Office 310 Old Santa Fe Trail Santa Fe, NM 87504

Director New Mexico Oil Conservation Division 1220 South St. Francis Drive 87505 Santa Fe, NM

Re: November 1, 2002 revision of Exhibit B Schedule of Ownership of the Cat Head Mesa Unit Agreement, Socorro County.

Ladies and Gentlemen:

Enclosed are two copies of the November 1, 2002 revision of Exhibit B Schedule of Ownership of the Cat Head Mesa Unit Agreement, Socorro County. Also, enclosed is a copy of Exhibit B with the changes highlighted.

Copies of the revised Exhibit B are also being mailed to the Bureau of Land Management at Roswell.

Very truly yours,

Primero Operating, Inc.

By: Ben Donegan, Agent

сл	4	ట	N	-		Tract <u>No.</u>		
T. 4 S., R. 9 E. Sec. 10: All Sec. 13: W2, W2SE Sec. 14: All Sec. 15: All	T. 4       S. R. 9       E.         Sec. 6:       Lots 1-7, S2NE, SENW,         SE, E2SW (All)         Sec. 7:       Lots 1-4, E2, E2W2 (All)         Sec. 17:       E2, W2W2         Sec. 18:       Lots 1-4, E2, E2W2 (All)	T. <u>4</u> <u>8</u> . <u>R</u> . <u>9</u> <u>E</u> . Sec. <u>4</u> : Lots 1-4, S2, S2N2 (All) Sec. <u>5</u> : Lots 1-4, S2, S2N2 (All) Sec. <u>8</u> : N2, W2SW, S2SE Sec. <u>9</u> : All	T. 4 S., R. 8 E. Sec. 12: All Sec. 13: All Sec. 23: E2 Sec. 24: All	<u>T. 4 S., R. 8 E.</u> Sec. 3: Lots 1-4, S2, S2N2 (All) Sec. 10: All Sec. 11: All Sec. 14: S2N2, S2	FEDERAL LANDS	t Description		
2,320.00	2,388.27	2,406.76	2,240.00	2,400.76		Acres	SCHE CAT HEAD Socorro	
NM 91536 8-31-03	NM 91535 8-31-03	NM 91534 8-31-03	NM 91533 8-31-03	NM 91532 8-31-03		Lease Nor and Expiration Date	SCHEDULE OF OWNERSHIP AT HEAD MESA UNIT AGREEMENT Socorro County, New Mexico	EXHIBIT B
12.5%	12.5 <b>X</b>	12.5 <b>%</b>	12.5 <b>%</b>	12.5 <b>%</b>		Basic Royalty	7	
*	*	*	*	¥		Lessee of Becord		
**5.075892X	**5,075892 <b>%</b>	**5,075892X	**5.075892X	**5.075892 <b>X</b>		Overriding <u>Royalty</u>		
* *	* *	* *	* *	* *		Working Interest		

Revised 11-1-02

Cat Head Mesa Unit

13	12	11	10	9	8	7	<del>o</del>	Tract No.	Cat H
<u>T. 4 S., R. 8 E.</u> Sec. 15: S2NE, SE	<mark>T. 3 S., T. 9 E.</mark> Sec. 33: 92	T. 3 S., R. 8 E. Sec. 35: 82	T. 3 S., R. 9 E. Sec. 31: Lots 1-4, E2, E2W2 (All T. 4 S., R. 9 E. Sec. 3: Lots 1-4, S2N2, N2S2 Sec. 11: All	T. 4 S., R. 9 E. Sec. 28: All Sec. 29: All Sec. 30: Lots 1-4, E2, E2W2 (All) Sec. 31: Lots 1-4, E2, E2W2 (All)	T. 4 S., R. 9 E. Sec. 27: All Sec. 33: All Sec. 34: N2, N2S2, S2SW Sec. 35: All	T. 4 S., R. 9 E. Sec. 23: All Sec. 24: W2E2, W2, SESE Sec. 25: All Sec. 26: All	<b>T.</b> 4 S., R. 9 E. Sec. 19: Lots 1-4, E2, E2W2, (All) Sec. 20: N2NE, W2NW, S2 Sec. 21: All Sec. 22: All	t Description	Head Mesa Unit
240.00	320.00	320.00	1,756.28	2,551.84	2,480.00	2,440.00	2,395.88	Acres	
NM 93028 4-30-04	NM 93026 4-30-04	NM 93025 3-31-04	NM 91587 9-30-03	NM 91540 8-31-03	NM 91539 8-31-03	NM 91538 8-31-03	NM 91537 8-31-03	Lease No. and Expiration Date	
12.5%	12.5%	12.5%	12.5 <b>%</b>	12.5%	12.5 <b>X</b>	12.5%	12.5 <b>%</b>	Basic Royalty	
¥	*	¥	*	*	*	*	*	Lessee of Record	
**5.075892%	**5.075892%	**5.075892%	<b>**5.075892</b> %	<b>**5.075892X</b>	<b>*</b> *5.075892 <b>X</b>	<b>**5.075892%</b>	<b>**</b> 5.075892 <b>%</b>	Overriding <u>Royalty</u>	
***	***	**	* *	* *	*	**	****	Working Interest	Page 2

24	23	22	21	20	19	18	17	16		15	14	Tract <u>No.</u>	Cat ]
<u>T. 4 S., R. 9 E.</u> Sec. 17: E2W2	T. 4 S., R. 9 E. Sec. 16: All	T. 4 S., R. 9 E. Sec. 2: Lots 1-4, S2, S2N2 (All)	T. 4 S., R. 8 E. Sec. 36: E2	T. <u>4 S., R. 8 E.</u> Sec. 25: All	T. <u>4 S., B. 8 E.</u> Sec. 2: Lots 1-4, S2, S2N2 (All)	T. <u>4 S., R. 8 E.</u> Sec. 1: Lots 1-4, S2, S2N2 (All)	T. 3 S., R. 9 E. Sec. 32: 82	<u>T. 3 S., R. 8 E.</u> Sec. 36: S2	STATE LANDS	T. <u>5</u> S., <u>R.</u> 9 <u>E</u> . Sec. 3: S2, S2NW Sec. 4: SE, S2NE Sec. 9: E2 Sec. 10: All Sec. 11: N2	T. <u>4 S., R. 9 E.</u> Sec. 12: W2	t <u>Description</u>	Cat Head Mesa Unit
160.00	640.00	640.60	320.00	640.00	640.52	640.24	320.00	320.00		1,920.00	320.00	Acres	
LH 4449 6-1-03	LH 4448 6-1-03	LH 4447 6-1-03	LH 4446 6-1-03	LH 4442 6-1-03	LH 4440 6-1-03	LH 4439 6-1-03	LH 4437 6-1-03	LH 4434 6-1-03		NM 97648 9-30-05	NM 93029 3-31-04	Lease No. and Expiration Date	
12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%		12.5%	12.5%	Basic <u>Royalty</u>	
¥	*	¥	¥	¥	¥	¥	*	*		*	*	Lessee of Becord	
**5.075892%	**5.075892 <b>%</b>	**5.075892%	**5.075892%	**5.075892%	**5.075892 <b>%</b>	**5.075892 <b>%</b>	**5.075892%	**5.075892%		<b>**</b> 5.075892 <b>X</b>	<b>*</b> *5.075892 <b>%</b>	Overriding <u>Royalty</u>	
***	***	**	**	* *	* *	* *	* *	* *		* *	* *	Working Interest	Page 3

31	30	29	28	27	26	25	Tract <u>No.</u>	Cat F
T. 4       S., R. 9       E.         Sec. 3:       S2S2         Sec. 8:       N2SE, E2SW         Sec. 13:       E2E2, W2NE         Sec. 20:       S2NE, E2NW         Sec. 24:       E2NE, NESE	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	T. <u>5 S., R. 9 E.</u> Sec. 2: Lots 1-4, S2, S2N2 (All) PATENTED LANDS	<u>T. 5 S., R. 8 E.</u> Sec. 1: Lots 1,2, SE, S2NE	<u>T. 4 S., R. 9 E.</u> Sec. 36: All	<u>T. 4 S., R. 9 E.</u> Sec. 34: S2SE	T. <u>4 S., R. 9 E.</u> Sec. 32: All	t Description	Cat Head Mesa Unit
840.00	3,466.87	567.60	283.42	640.00	80,00	640.00	Acres	
*	Harvey Mineral Trust 10-16-05	LH <b>4460</b> 6-1-03	LH 4453 6-1-03	LH 5552 6-1-03	LH 4451 6-1-03	LH 4450 6-1-03	Lease No. and Expiration Date	
<b>***</b> *12.5%	t 12.5 <b>%</b>	12.5 <b>X</b>	12.5%	12.5%	12.5%	12.5%	Basic <u>Boyalty</u>	
*	*	*	*	*	*	*	Lessee of Record	
<b>**5.0</b> 75892 <b>X</b>	**5.075892%	<b>**5.075892X</b>	**5.075892 <b>X</b>	**5.075892%	**5.075892%	**5.075892%	Overriding <u>Royalty</u>	
* *	*	* *	***	**	**	**	Working <u>Interest</u>	Page 4

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Bowerman Energy Company Bright & Company Ben and Ruby Donegan E. S. Mayer & Sons, Ltd.	0.060908 0.750000 0.070963	JMA Exploration, Ltd. JMA Exploration, Ltd. MJR Investment Corporation Stephen D. & Nancy J. Nolan	0.070963 0.064851 0.250000
Robert D. and Frances E. Gunn	0.671306	The Rudman Partnership	0.156120
Nelson Bunker Hunt	0.250000	The Rudman Partnership	0.075892+
Integras Resources, Inc.	0.250000	Tejon Exploration Company	0.070963
		Warren, Inc.	0.258986

**\*\***\*Ownership of the 100.0% working interest of all 31 Tracts in the unit area is as follows:

Warren, Inc.	Tejon Exploration Company	Slash Four Enterprises, Inc.	MJR Investment Corporation	JMA Oil Properties, Ltd.	Bill Fenn	Ceja Corporation	Benson-Montin-Greer Drilling Corporation
							Corporation
5.385367	13.518035	3.693512	23.414638	2.515268	5.187037	35.108470	11.177673

\*\*\*\*The per cent ownership of the 12.5% Basic Royalty of Tract No. 31 is as follows:

Gary M. Lovelace	Carl L. Johnson	Jean Collinson Suggs	Joan Collinson Deming	Dru Wynn Lovelace King	Noel Holt Lovelace	<b>Carole Lynn Lovelace Hutchison</b>	Judith Ann Lovelace	Roe Lovelace	Frances Alice Lovelace	Knollene Lovelace McDaniel
8.620415	8.620415	15.518335	15.518335	1.580278	1.580278	1.580278	4.740834	9.481667	15.518335	17.240830

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# SUMMARY Acres Per Cent of Unit Area Federal Lands 26,499.79 70.97 State Lands 6,532.38 17.50 Patented Lands 4,306.87 11.53 Totals 37,339.04 100.00

cı	4.	ω	N	-		Tract <u>No.</u>		
T. 4 S., B. 9 E. Sec. 10: All Sec. 13: W2, W2SE Sec. 14: All Sec. 15: All	T. 4 S., R. 9 E.         Sec. 6: Lots 1-7, S2NE, SENW,         SE, E2SW (All)         Sec. 7: Lots 1-4, E2, E2W2 (All)         Sec. 17: E2, W2W2         Sec. 18: Lots 1-4, E2, E2W2 (All)	T. 4 8. R. 9 E. Sec. 4: Lots 1-4, S2, S2N2 (All) Sec. 5: Lots 1-4, S2, S2N2 (All) Sec. 8: N2, W2SW, S2SE Sec. 9: All	T. 4 S., R. 8 E. Sec. 12: All Sec. 13: All Sec. 23: E2 Sec. 24: All	T. 4 S., R. 8 E. Sec. 3: Lots 1-4, S2, S2N2 (All) Sec. 10: All Sec. 11: All Sec. 14: S2N2, S2	FEDERAL LANDS	t Description		
2,320.00	2,388.27	2,406.76	2,240.00	2,400.76		Acres	SCHEI CAT HEAD Socorro	
NM 91536 8-31-03	NM 91535 8-31-03	NM 91534 8-31-03	NM 91533 8-31-03	NM 91532 8-31-03		Lease Nor and Expiration Date	SCHEDULE OF OWNERSHIP AT HEAD MESA UNIT AGREEMENT Socorro County, New Mexico	EXHIBIT B
12.5%	12.5%	12.5 <b>X</b>	12.5%	12.5 <b>%</b>		Basic Royalty	T	
*	*	*	*	¥		Leasee of Record		
<b>**5.075892%</b>	<b>**</b> 5.075892 <b>%</b>	<b>**5.075892%</b>	**5.075892 <b>X</b>	**5 <b>.0</b> 75892 <b>X</b>		Overriding Royalty		
* *	*	* *	* * *	* * *		Working Interest		

Revised 11-1-02

13	12	11	10	မ	8	7	<b>o</b>	Tract <u>No.</u>	Cat I
T. 4 S., R. 8 E. Sec. 15: S2NE, SE	T. 3 S., T. 9 E. Sec. 33: S2	<u>T. 3 S., R. 8 E.</u> Sec. 35: S2	T. 3 S., R. 9 E. Sec. 31: Lots 1-4, E2, E2W2 (All T. 4 S., R. 9 E. Sec. 3: Lots 1-4, S2N2, N2S2 Sec. 11: All	T. 4 S., R. 9 E. Sec. 28: All Sec. 29: All Sec. 30: Lots 1-4, E2, E2W2 (All) Sec. 31: Lots 1-4, E2, E2W2 (All)	T. 4 S., R. 9 E. Sec. 27: All Sec. 33: All Sec. 34: N2, N2S2, S2SW Sec. 35: All	T. 4 S., R. 9 E. Sec. 23: All Sec. 24: W2E2, W2, SESE Sec. 25: All Sec. 26: All	<b>T.</b> 4 S., R. 9 E. Sec. 19: Lots 1-4, E2, E2W2, (All) Sec. 20: N2NE, W2NW, S2 Sec. 21: All Sec. 22: All	t <u>Description</u>	Cat Head Mesa Unit
240.00	320.00	320.00	1,756.28	2,551.84	2,480.00	2,440.00	2,395.88	Acres	
NM 93028 4-30-04	NM 93026 4-30-04	NM 93025 3-31-04	NM 91587 9-30-03	NM 91540 8-31-03	NM 91539 8-31-03	NM 91538 8-31-03	NM 91537 8-31-03	Lease No. and Expiration Date	
12.5%	12.5%	12.5%	12.5 <b>X</b>	12.5%	12.5%	12.5 <b>X</b>	12.5 <b>%</b>	Basic <u>Royalty</u>	
*	*	*	¥	¥	*	*	*	Lessee of Record	
**5.075892%	<b>*</b> *5.075892 <b>%</b>	**5.075892%	**5.075892 <b>%</b>	**5.075892 <b>%</b>	**5.075892 <b>X</b>	**5.075892%	<b>*</b> *5.075892 <b>X</b>	Overriding <u>Royalty</u>	
***	**	**	* *	* *	* *	* *	* * *	Working Interest	Page 2

24	23	22	21	20	19	18	17	16		15	14	Tract <u>No.</u>	Cat ]
<u>T. 4 S., R. 9 E.</u> Sec. 17: E2W2	<u>T. 4 S., R. 9 E.</u> Sec. 16: All	T. <u>4 S., R. 9 E.</u> Sec. 2: Lots 1-4, S2, S2N2 (All)	T. <u>4 S., R. 8 E.</u> Sec. 36: E2	T. <u>4 S., R. 8 E.</u> Sec. 25: All	T. <u>4 S., B. 8 E.</u> Sec. 2: Lots 1-4, S2, S2N2 (All)	T. <u>4 S., R. 8 E.</u> Sec. 1: Lots 1-4, S2, S2N2 (All)	T. <u>3 S., R. 9 E.</u> Sec. 32: S2	<u>T. 3 S., R. 8 E.</u> Sec. 36: S2	STATE LANDS	T. 5 S., R. 9 E. Sec. 3: S2, S2NW Sec. 4: SE, S2NE Sec. 9: E2 Sec. 10: All Sec. 11: N2	<u>T. 4 S., R. 9 Ε.</u> Sec. 12: W2	t Description	Cat Head Mesa Unit
160.00	640.00	640.60	320.00	640.00	640.52	640.24	320.00	320.00		1,920.00	320.00	Acres	
LH 4449 6-1-03	LH 4448 6-1-03	LH 4447 6-1-03	LH 4446 6-1-03	LH 4442 6-1-03	LH 4440 6-1-03	LH 4439 6-1-03	LH 4437 6-1-03	LH 4434 6-1-03		NM 97648 9-30-05	NM 93029 3-31-04	Lease No. and Expiration Date	
12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%		12.5 <b>%</b>	12.5%	Basic Royalty	
¥	*	*	¥	*	¥	¥	*	*		*	*	Lessee of Record	
**5.075892%	**5.075892%	**5.075892%	**5.075892 <b>X</b>	**5.075892%	<b>**5.075892%</b>	<b>**5.075892%</b>	**5.075892%	**5.075892%		<b>**5.075892X</b>	**5.075892%	Overriding <u>Boyalty</u>	
***	**	***	* *	*	* *	* *	***	*		* *	**	Working <u>Interest</u>	Page 3

31	30 0		29	28	27	26	25	Tract <u>No.</u>	
T. 4       S., R. 9       E.         Sec.       3:       S2S2         Sec.       8:       N2SE, E2SW         Sec.       13:       E2E2, W2NE         Sec.       20:       S2NE, E2NW         Sec.       24:       E2NE, NESE	T. 4 S., R. 8 E.         Sec. 14: N2N2         Sec. 15: N2NE         T. 5 S., R. 9 E.         Sec. 3: Lots 1-4, S2NE         Sec. 4: Lots 1-4, S2NW, SW         Sec. 5: Lots 1-4, S2, S2N2 (All)         Sec. 6: Lots 1-7, SENW, E2SW,         Sec. 7: Lots 1-4, E2, E2W2 (All)         Sec. 8: All	PATENTED LANDS	T. <u>5 S., R. 9 E.</u> Sec. 2: Lots 1-4, S2, S2N2 (All)	<u>T. 5 S., R. 8 E.</u> Sec. 1: Lots 1,2, SE, S2NE	<u>T. 4 S., R. 9 E.</u> Sec. 36: All	<u>T. 4 S., R. 9 E.</u> Sec. 34: S2SE	T. <u>4 S., R. 9 E.</u> Sec. 32: All	t Description	
840.00	3,466.87		567.60	283.42	640.00	80.00	640.00	Acres	
*:	Harvey Mineral Trus 10-16-05		LH 4460 6-1-03	LH 4453 6-1-03	LH 5552 6-1-03	LH 4451 6-1-03	LH 4450 6-1-03	Lease No. and Expiration Date	
***12.5X	L 12.5X		12.5%	12.5%	12.5%	12.5%	12.5%	Basic <u>Boyalty</u>	
*	*		*	*	*	*	*	Lessee of Record	
**5.075892 <b>%</b>	<b>**5.075892%</b>		**5.075892%	**5.075892%	**5.075892%	**5.075892%	**5.075892%	Overriding <u>Royalty</u>	
*	* *		**	**	**	**	***	Working Interest	Page 4

Cat Head Mesa Unit

# SUMMARY Acres Per Cent of Unit Area Federal Lands 26,499.79 70.97 State Lands 6,532.38 17.50 Patented Lands 4,306.87 11.53 Totals 37,339.04 100.00

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ຽ	4,	යා	N	1	Tract <u>No.</u>	
T. <u>4</u> S., <u>R.</u> 9 <u>E</u> . Sec. 10: All Sec. 13: W2, W2SE Sec. 14: All Sec. 15: All	T. 4       S. R. 9       E.         Sec. 6:       Lots 1-7, S2NE, SENW,         SE, E2SW (All)         Sec. 7:       Lots 1-4, E2, E2W2 (All)         Sec. 17:       E2, W2W2         Sec. 18:       Lots 1-4, E2, E2W2 (All)	T. 4 S. R. 9 E. Sec. 4: Lots 1-4, S2, S2N2 (All) Sec. 5: Lots 1-4, S2, S2N2 (All) Sec. 8: N2, W2SW, S2SE Sec. 9: All	T. 4 S., R. 8 E. Sec. 12: All Sec. 13: All Sec. 23: E2 Sec. 24: All	T. 4 S., R. 8 E. Sec. 3: Lots 1-4, 82, 92N2 (All) Sec. 10: All Sec. 11: All Sec. 14: S2N2, 52	L Description FEDERAL LANDS	
2,320.00	2,388.27	2,406.76	2,240.00	2,400.76	Acces	SCHE CAT HEAD Socorro
NM 91536 8-31-03	NM 91535 8-31-03	NM 91534 8-31-03	NM 91533 8-31-03	NM 91532 8-31-03	Lease Nor and Expiration Date	SCHEDULE OF OWNERSHIP CAT HEAD MESA UNIT AGREEMENT Socorro County, New Mexico
12.5 <b>X</b>	12.5%	12.5%	12.5X	12 <b>.5</b> %	Basic Royalty	~3
*	*	*	*	*	Le <b>sse</b> e o <u>f</u> Record	
<b>**5.075892%</b>	<b>*</b> *5.075892%	**5.075892 <b>%</b>	**5.075892X	**5.075892X	Overriding <u>Royalty</u>	
*	#	* * *		*	Working <u>Interest</u>	

EXHIBIT B

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Cat Head Mesa Unit

13	12	11	10	မ	8	7	<b>o</b>	Tract <u>No.</u>	Cat
<b>T. 4 S., R. 8 E.</b> Sec. 15: S2NE, SE	<mark>T. 3 S., T. 9 E.</mark> Sec. 33: S2	T. 3 S., R. 8 E. Sec. 35: 82	T. 3 S., R. 9 E. Sec. 31: Lots 1-4, E2, E2W2 (All T. 4 S., R. 9 E. Sec. 3: Lots 1-4, S2N2, N2S2 Sec. 11: All	T. <u>4</u> S., <u>R.</u> <u>9</u> <u>E</u> . Sec. 28: All Sec. 29: All Sec. 30: Lots 1-4, E2, E2W2 (All) Sec. 31: Lots 1-4, E2, E2W2 (All)	T. 4 S., R. 9 E. Sec. 27: All Sec. 33: All Sec. 34: N2, N2S2, S2SW Sec. 35: All	T. 4 S., R. 9 E. Sec. 23: All Sec. 24: W2E2, W2, SESE Sec. 25: All Sec. 26: All	T. 4 S., R. 9 E. Sec. 19: Lots 1-4, E2, E2W2, (All) Sec. 20: N2NE, W2NW, S2 Sec. 21: All Sec. 22: All	t Description	Cat Head Mesa Unit
240.00	320.00	320.00	1,756.28	2,551.84	2,480.00	2,440.00	2,395.88	Асгев	
NM 93028 4-30-04	NM 93026 4-30-04	NM 93025 3-31-04	NM 91587 9-30-03	NM 91540 8-31-03	NM 91539 8-31-03	NM 91538 8-31-03	NM 91537 8-31-03	Lease No. and <u>Expiration Date</u>	
12.5%	12.5%	12.5%	12.5 <b>X</b>	12.5 <b>%</b>	12.5 <b>%</b>	12.5%	12.5%	Basic Royalty	
¥	*	*	*	*	*	*	*	Lessee of Record	
**5.075892%	**5.075892%	**5.075892%	<b>**5.075892X</b>	<b>*</b> *5.075892 <b>X</b>	<b>*</b> *5.075892 <b>X</b>	<b>*</b> *5.075892 <b>%</b>	<b>**</b> 5.075892%	Overriding <u>Boyalty</u>	
***	***	**	*	*	* *	* *	* *	Working Interest	Page 2

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24	23	22	21	20	19	18	17	16		15	14	Tract <u>No.</u>	Cat ]
<u>T. 4 S., R. 9 E.</u> Sec. 17: E2W2	<u>T. 4 S., R. 9 E.</u> Sec. 16: All	T. <u>4 S., R. 9 E.</u> Sec. 2: Lots 1-4, S2, S2N2 (All)	T. 4 S., R. 8 E. Sec. 36: E2	T. 4 S., R. 8 E. Sec. 25: All	T. <u>4 S., B. 8 E.</u> Sec. 2: Lots 1-4, S2, S2N2 (All)	T. <u>4 S., R. 8 E.</u> Sec. 1: Lots 1-4, S2, S2N2 (All)	T. <u>3 S., R. 9 E.</u> Sec. 32: S2	<u>Τ. 3 S., R. 8 E.</u> Sec. 36: S2	STATE LANDS	T. <u>5</u> S., R. <u>9</u> E. Sec. <u>3</u> : S2, S2NW Sec. <u>4</u> : SE, S2NE Sec. <u>9</u> : E2 Sec. 10: All Sec. 11: N2	T. <u>4 S., R. 9 E.</u> Sec. 12: W2	t Description	Cat Head Mesa Unit
160.00	640.00	640.60	320.00	640.00	640.52	640.24	320.00	320.00		1,920.00	320.00	Acres	
LH 4449 6-1-03	LH 4448 6-1-03	LH 4447 6-1-03	LH 4446 6-1-03	LH 4442 6-1-03	LH 4440 6-1-03	LH 4439 6-1-03	LH 4437 6-1-03	LH 4434 6-1-03		NM 97648 9-30-05	NM 93029 3-31-04	Lease No. and Expiration Date	
12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%		12 <b>.5</b> %	12.5%	Basic Royalty	
¥	*	¥	*	*	*	*	*	*		*	*	Lessee of Record	
**5.075892X	<b>**5.075892%</b>	**5.075892%	**5.075892%	**5.075892%	**5,075892%	<b>**5.075892%</b>	**5.075892%	**5.075892%		<b>*</b> *5.075892 <b>%</b>	**5.075892 <b>X</b>	Overriding <u>Boyalty</u>	
***	***	***	**	* *	***	***	***	***		* *	**	Working Interest	Page 3

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31	30	29	28	27	26	25	Tract <u>No.</u>	Cat H
T.       4       S.       R.       9       E.         Sec.       3:       S2S2         Sec.       8:       N2SE, E2SW         Sec.       13:       E2E2, W2NE         Sec.       20:       S2NE, E2NW         Sec.       24:       E2NE, NESE	T. 4 S., R. 8 E.         Sec. 14: N2N2         Sec. 15: N2NE         T. 5 S., R. 9 E.         Sec. 3: Lots 1-4, S2NE         Sec. 4: Lots 1-4, S2NW, SW         Sec. 5: Lots 1-4, S2, S2N2 (A11)         Sec. 6: Lots 1-7, SENW, E2SW,         Sec. 7: Lots 1-4, E2, E2W2 (A11)         Sec. 8: A11         Sec. 9: W2	T. <u>5</u> S., <u>R.</u> 9 <u>E.</u> Sec. 2: Lots 1-4, S2, S2N2 (All) PATENTED LANDS	<u>T. 5 S., R. 8 E.</u> Sec. 1: Lots 1,2, SE, S2NE	T. <u>4 S., R. 9 E.</u> Sec. 36: All	T. <u>4 S., R. 9 E.</u> Sec. 34: S2SE	T. <u>4 S., R. 9 E.</u> Sec. 32: All	t Description	Cat Head Mesa Unit
840.00	3,466.87	567.60	283.42	640.00	80.00	640.00	Acres	
#	Harvey Mineral Trust 10-16-05	LH <b>446</b> 0 6-1-03	LH 4453 6-1-03	LH 5552 6-1-03	LH 4451 6-1-03	LH 4450 6-1-03	Lease No. and Expiration Date	
****12.5%	t 12.5%	12 <b>.5</b> %	12.5%	12.5%	12.5%	12.5%	Basic <u>Boyalty</u>	
*	*	*	*	*	*	*	Lessee of Record	
<b>**5.0</b> 75892 <b>%</b>	<b>**5.075892%</b>	<b>**5.075892%</b>	**5.075892 <b>X</b>	**5.075892%	**5.075892%	**5.075892%	Overriding <u>Royalty</u>	
* *	* *	* *	**	***	**	*	Working <u>Interest</u>	Page 4

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Cat
Head
Mesa
Unit

\*The Lessee of Record of all 31 Tracts in the unit area is Frizzell Exploration Company II.

**\*\*Ownership** of the 5.075892% overriding royalty interest of all 31 Tracts in the unit area is as follows:

	Jacobs Exploration, Ltd.	Integras Resources, Inc.	Nelson Bunker Hunt	Robert D. and Frances E. Gunn	Frizzell Exploration Company II	E. S. Mayer & Sons, Ltd.	Ben and Ruby Donegan	Bright & Company	Bowerman Energy Company
	0.171510	0.250000	0.250000	0.671306	0.895076	0.070963	0.750000	0.060908	0.065965
Warren, Inc.	Tucker-Scully Interests, Ltd.	Tejon Exploration Company	The Rudman Partnership	The Rudman Partnership	Saxon Oil Company	Stephen D. & Nancy J. Nolan	MJR Investment Corporation	JMA Exploration, Ltd.	JHJ Exploration, Ltd.
0.258986		0.070963					0.064851	0.070963	0.671306

+The Rudman Partnership 0.075892% overriding royalty interest is payable out of the Benson-Montin-Greer Drilling Corporation (0.008483%), Ceja Corporation (0.029567%), MJR Investment Corporation (0.017770%), Slash Four Enterprises, Inc. (0.002803%), Tejon Exploration Company (0.013182%) and Warren, Inc. (0.004087%) working interests.

\*\*\*Ownership of the 100.0% working interest of all 31 Tracts in the unit area is as follows:

Warren, Inc.	Tejon Exploration Company	Slash Four Enterprises, Inc.	MJR Investment Corporation	JMA Oil Properties, Ltd.	Bill Fenn	Ceja Corporation	Benson-Montin-Greer Drilling Corporation
5.385367	13.518035	3.693512	23.414638	2.515268	5.187037	35.108470	11.177673

\*\*\*\*The per cent ownership of the 12.5% Basic Royalty of Tract No. 31 is as follows:

Gary M. Lovelace	Carl L. Johnson	Jean Collinson Suggs	Joan Collinson Deming	Dru Wynn Lovelace King	Noel Holt Lovelace	Carole Lynn Lovelace Hutchison	Judith Ann Lovelace	Roe Lovelace	Frances Alice Lovelace	Knollene Lovelace McDaniel
8.620415	8.620415	15.518335	15.518335	1.580278	1.580278	1.580278	4.740834	9.481667	15.518335	17.240830

# SUMMARY Acres Per Cent of Unit Area Federal Lands 26,499.79 70.97 State Lands 6,532.38 17.50 Patented Lands 4,306.87 11.53 Totals 37,339.04 100.00

CONFIDENTIAL

Manzano Oil Corporation No. 1 Cat Head Mesa NESW Sec. 8, T. 4 S., R. 9 E. Socorro Co., New Mexico

Elevation: 6224 GL, 6279 KB

Formation	Top	<u>Thickness</u>
Permian	At surface	3714'+
San Andres Formation	At surface	450'+
Glorieta Sandstone	450'	295'
Yeso Formation	745'(+5534)	1752'
Joyita Member	745'(+5534)	15'
Cañas Member	760'(+5519)	192'
Torres Member	Est 952'(+5327)	1268'
Salt	1744-2209'	465'
Meseta Blanca Member	(Tubb) 2220'(+4059)	290'
Abo Formation	2510'(+3769)	1217'
Diabase Sill	3440-3624'	184'
Pennsylvanian	3938'(+2341)	324 '
Atoka Series	3938'(+2341)	324'
Precambrian	4262'(+2017)	1918'+
TD	6180'	

DST No. 1 4665-4777' (Precambrian) Conventional Rec 2141' (23 B) W (59,000 ppm Cl) in 96 min. FP 81-1034#, SIP 1215-1213#

DST No. 2 4540-4647' (Precambrian) Straddle Rec 2230' (24 B) W (54,000 ppm Cl) in 75 min, FP 94-1073#, SIP 1150-1150#

DST No. 3 Misrun

DST No. 4 4158-4295' (Atoka and Precambrian) Straddle Rec 3321' (40 B) W (31,000 ppm Cl) in 30 min, FP 1069-1531#, SIP 1544-1521#

Perf 4202-12', 4218-38' (Atoka) Swab est 300 B gassy W/D (93% CO2, 6% N2, 1% Cl+, Tr He)

Perf 3690-3700', 3720-3737', 3792-3823' (Abo) Inj 600 BHC1, Swab 100 BLW FG-tstm (95% N2, 2% CO2, 2% He, Tr C1)

CONFINENTIAL

Cat Head Mesa Unit No. 1 Well

Potential Gas Zones

Tertiary sill:

3442-3624

### Abo granite washes:

3178-90, 3292-98

3692-3700, 3720-26, 3728-33, 3792-3822 5-2 Perf 3690-3700, 3720-37, 3792-3823 5-3 Swab dry 5-6 TP 100, Gas tstm, FL 3180, Acid w/5,000 gals Swab\*100BW in 4 hrs 5-7 TP 120, FL 2500, Swab\*20 B gassy W (C1=96,000 ppm, Drlg mud\*100,000 ppm) 5-8 Pulled plugs, Shut-in

3865-71, 3901-11

### Atoka sands:

4204-12, 4218-36 DST 4158-4295 (Atoka + Precambrian) Rec 40 BW in 30 min (31,000 ppm Cl, Drlg mud\*30,000 ppm € 4210) SIP 1544 4-29 Perf 4202-12, 4218-38 4-30 Swab dry, Swab 150 B gassy W 5-01 Swab 140 B gassy W, FL 2900 5-02 Unseat packer

Precambrian granodiorite:

4262-4332

4540-4667 DST Rec 24 BW (54,000 ppm Cl, Drlg mud\*20,000 ppm) in 75 min, SIP 1150

4665-4777 DST Rec 23 BW (59,000 ppm Cl, Drlg mud#23,000 ppm) in 96 min, SIP 1150

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F.S.:	20926	M.S.:		0	API: 30	53200120					
WELL NAN	EW MEXICO	AD MES			COUNT	Y: SOCO	RRO	36 37	Perforations: 90-3700' 20-3737'		
FIELD: WI	'RIMERO O LDCAT	гекан	NG, I	NC.				37	92-3823'		
LOCATION	): SEC. 8, T4 0 FSL, 1650										
DATE SAN	IPLED: 0205	09			DATE	OMPLET	ED:				
SAMPLED	BY: PRIME	RO/DEC	&DL	D	ELEVA	TION, FT	6,264	(	7L		
PRODUCII		FION: PF	RM ·	- ABO							
TRUE VER		TH (FT):		3,820.00	THICKNE	SS IN FE	ET:	130	LATITUDE:	3	3.97450
MEASURE	D DEPTH (F	<b>T)</b> :			OPEN FL	OW, MCI	=/D:	0	LONGITUDE:	-10	6.02117
SHUT IN V	VELLHEAD F	PRES., P	SIG:	0							
CHECK O	F DATA - TH THOUT CO	IE WELI RRECTI	L DAT ON, (	TA ARE ACC	CURATE, DRRECTED	ABOVE.					
REMARKS	;										
ANALYSIS	:										
METHANE		0.31	%	NORMAL F	PENTANE	0.00	%	OXYGE	N	0.00	%
ETHANE		0.02	%	ISOPENTA	NE	0.00	%	ARGON	l	0.29	%
PROPANE		0.00	%	CYCLOPE	NTANE		%	HYDRO	GEN	0.03	%
	BUTANE	0.00	%	HEXANES	PLUS	0.00	%	H2S *		0.00	%
ISOBUTAN	IE	0.00	%	NITROGE	1	95.29	%	CO2		1.77	%
SPECIFIC	GRAV.:	0.958						HELIUN	1	2.28	•/•
TRACEDE	ENOTES CO	MPONE	NTS	< 0.005%				TOTAL		99.99	%

CALCULATED GROSS BTU/CU. FT., DRY AT 60 DEG. F AND 30 IN MERCURY: 4

\* DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE.

### PERMISSION FOR RELEASE:

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PERMISSION IS HEREBY GRANTED FOR THE BUREAU OF LAND MANAGEMENT TO RELEASE THE ABOVE DATA, TOGETHER WITH SIMILAR DATA RELEASED BY OTHER OPERATORS AS PUBLIC INFORMATION AND PARTS OF A SERIES OF PAPERS ON ANALYSES OF GASES FROM VARIOUS FIELDS, STATES, OR REGIONS.

COMPANY

BY \_\_\_\_\_

TITLE \_\_\_\_\_

STATE: NEW MEXICO STATE: NEW MEXICO COUNTY: SOCORRO 3690-3700' 3720-3737' 3792-3823' OWNER: PRIMERO OPERATING, INC. FIELD: WILDCAT LOCATION: SEC. 8, T4S, R9E SPOT: 2310 FSL, 1650 FWL DATE SAMPLED: 020506 DATE COMPLETED: SAMPLED BY: PRIMERO/DEC&DLD ELEVATION, FT: 6,264 GL PRODUCING FORMATION: PERM - ABO TRUE VERTICAL DEPTH (FT): 3,820.00 THICKNESS IN FEET: 130 LATITUDE: 33.97450	· · · · ·		I	Repor	t of z	Ana	ysi	S			
3720-3737'         3720-3823'         OWNER: PRIMERO OPERATING, INC.         FILD: WILDCAT         LOCATION: SEC. 8, T4S, R9E         SAMPLED BY: PRIMERO/DEC&DLD       ELEVATION, FT: 6,264       GL         TRUE VERTICAL DEPTH (FT):       3,820.00       THICKNESS IN FEET:       130       LATITUDE: -106.02117         SHUT IN WELLHAD PRES, PSIG:       0         CHECK OF DATA - THE WELL DATA ARE ACCURATE,				0				-			1
OWNER: PRIMERO OPERATING, INC. FIELD: WILDCAT LOCATION: SEC. 8, T4S, R9E SPOT: 2310 FSL, 1650 FWL DATE SAMPLED: 020506 DATE COMPLETED: SAMPLED BY: PRIMERO/DEC&DLD ELEVATION, FT: 6,264 GL PRODUCING FORMATION: PERM - ABO TRUE VERTICAL DEPTH (FT): 3,820.00 THICKNESS IN FEET: 130 LATITUDE: 33.97450 MEASURED DEPTH (FT): OPEN FLOW, MCF/D: 0 LONGITUDE: -106.02117 SHUT IN WELLHEAD PRES., PSIG: 0 CILECK OF DATA - THE WELL DATA ARE ACCURATE, (			A TIN	IT NO 1	COUNT	1, 5000	KRU				
FIELD: WILDCAT         LOCATION: SEC. 8, T4S, R9E         SPOT: 2310 FSL, 1650 FWL         DATE SAMPLED: 02050       DATE COMPLETED:         SAMPLED BY: PRIMERO/DEC&DLD       ELEVATION, FT: 6,264       GL         PRODUCING FORMATION: PERM - ABO         TRUE VERTICAL DEPTH (FT):       3,820.00       THICKNESS IN FEET:       130       LATITUDE:       33.97450         MEASURED DEPTH (FT):       3,820.00       THICKNESS IN FEET:       0       LONGITUDE:       -106.02117         SHUT IN WELLHEAD PRES, PSIG:       0       OPEN FLOW, MCF/D:       0       LONGITUDE:       -106.02117         SHUT IN WELLLEAD PRES, PSIG:       0       CHECK OF DATA - THE WELL DATA ARE ACCURATE, (								2772	- J02 J		
LOCATION: SEC. 8, T4S, R9E SPOT: 2310 FSL, 1650 FWL DATE SAMPLED: 020506 DATE COMPLETED: SAMPLED BY: PRIMERO/DEC&DLD ELEVATION, FT: 6,264 GL PRODUCING FORMATION: PERM - ABO TRUE VERTICAL DEPTH (FT): 3,820.00 THICKNESS IN FEET: 130 LATITUDE: 33.97450 MEASURED DEPTH (FT): 0PEN FLOW, MCF/D: 0 LONGITUDE: -106.02117 SHUT IN WELLHEAD PRES., PSIG: 0 CHECK OF DATA - THE WELL DATA ARE ACCURATE, (		OI BRAT	10,1	ne.							
SPOT: 2310 FSL, 1650 FWL         DATE SAMPLED: 020506       DATE COMPLETED:         SAMPLED BY: PRIMERO/DEC&DLD       ELEVATION, FT: 6,264       GL         PRODUCING FORMATION: PERM - ABO       THICKNESS IN FEET:       130       LATITUDE:       33.97450         TRUE VERTICAL DEPTH (FT):       3,820.00       THICKNESS IN FEET:       130       LATITUDE:       33.97450         MEASURED DEPTH (FT):       0       OPEN FLOW, MCF/D:       0       LONGITUDE:       -106.02117         SHUT IN WELLHEAD PRES., PSIG:       0       CHECK OF DATA - THE WELL DATA ARE ACCURATE, (		T4S. R9E									
SAMPLED BY: PRIMERO/DEC&DLD       ELEVATION, FT: 6,264       GL         PRODUCING FORMATION: PERM - ABO         TRUE VERTICAL DEPTH (FT):       3,820.00       THICKNESS IN FEET:       130       LATITUDE:       33.97450         MEASURED DEPTH (FT):       3,820.00       THICKNESS IN FEET:       130       LATITUDE:       33.97450         SIGE 0         CHECK OF DATA - THE WELL DATA ARE ACCURATE,         JWITHOUT CORRECTION, AS CORRECTED ABOVE.         REMARKS         ANALYSIS:         METHANE       0.21       %       NORMAL PENTANE       0.00       %       ARGON       0.00       %         PROPARE       0.00       %       OXYGEN       0.00       %         METHANE       0.00       %       OXYGEN       0.00       %         PROPANE       0.00       %       OXYGEN       0.00       %         OPROPANE       0.00       %       PROPANE       0.00       %       MEXANCES       %         NORMAL PENTANE       0.00       %       HYDROGEN       0.00       %         NORMAL BUTANE <td></td>											
PRODUCING FORMATION: PERM - ABO         TRUE VERTICAL DEPTH (FT):       3,820.00       THICKNESS IN FEET:       130       LATITUDE:       33.97450         MEASURED DEPTH (FT):       OPEN FLOW, MCF/D:       0       LONGITUDE:       106.02117         SHUT IN WELLHEAD PRES., PSIG:       0       0       CHECK OF DATA - THE WELL DATA ARE ACCURATE,       0       106.02117         CHECK OF DATA - THE WELL DATA ARE ACCURATE,       AS CORRECTED ABOVE.       REMARKS       NOTHOUT CORRECTION,AS CORRECTED ABOVE.         REMARKS       ANALYSIS:	DATE SAMPLED: 02	20506			DATE (		TED:				
TRUE VERTICAL DEPTH (FT):       3,820.00       THICKNESS IN FEET:       130       LATITUDE:       33.97450         MEASURED DEPTH (FT):       OPEN FLOW, MCF/D:       0       LONGITUDE:       -106.02117         SHUT IN WELLHEAD PRES., PSIG:       0       0       LONGITUDE:       -106.02117         SHUT IN WELLHEAD PRES., PSIG:       0       0       LONGITUDE:       -106.02117         SHUT IN WELLHEAD PRES., PSIG:       0       0       LONGITUDE:       -106.02117         SHUT IN WELLHEAD PRES., PSIG:       0       0       LONGITUDE:       -106.02117         SHUT IN WELLHEAD PRES., PSIG:       0       0       LONGITUDE:       -106.02117         SHUT IN WELLHEAD PRES., PSIG:       0       VITHOUT CORRECTION, (, AS CORRECTED ABOVE.)	SAMPLED BY: PRIN	MERO/DEC	C&DL	D	ELEVA	TION, FT	6,264	C	н.		
MEASURED DEPTH (FT):       OPEN FLOW, MCF/D:       0       LONGITUDE:       -106.02117         SHUT IN WELLHEAD PRES., PSIG:       0       0       0       0       0       0         CHECK OF DATA - THE WELL DATA ARE ACCURATE, () WITHOUT CORRECTION, () AS CORRECTED ABOVE.       Second Condition (Condition	PRODUCING FORM	IATION: PF	CRM	- ABO							
SHUT IN WELLHEAD PRES., PSIG: 0 CHECK OF DATA - THE WELL DATA ARE ACCURATE, () WITHOUT CORRECTION, () AS CORRECTED ABOVE. REMARKS ANALYSIS: METHANE 0.21 % NORMAL PENTANE 0.00 % OXYGEN 0.00 % ETHANE 0.02 % ISOPENTANE 0.00 % ARGON 0.28 % PROPANE 0.00 % CYCLOPENTANE % HYDROGEN 0.06 % NORMAL BUTANE 0.00 % HEXANES PLUS 0.00 % H2S * 0.00 % ISOBUTANE 0.00 % NITROGEN 95.16 % CO2 2.01 % SPECIFIC GRAV.: 0.959 HELIUM 2.26 %	TRUE VERTICAL DE	EPTH (FT):		3,820.00	THICKNE	ESS IN FE	ET:	130	LATITUDE:	3	3.97450
CHECK OF DATA - THE WELL DATA ARE ACCURATE, AS CORRECTED ABOVE.REMARKSANALYSIS:METHANE0.21%NORMAL PENTANE0.00%OXYGEN0.00%ETHANE0.02%ISOPENTANE0.00%ARGON0.28%PROPANE0.00%CYCLOPENTANE%HYDROGEN0.06%NORMAL BUTANE0.00%HEXANES PLUS0.00%H2S *0.00%SPECIFIC GRAV.:0.959USPENUSPENHELIUM2.26%	MEASURED DEPTH	I (FT):			OPEN FL	OW, MC	F/D:	0	LONGITUDE:	-10	6.02117
() WITHOUT CORRECTION, () AS CORRECTED ABOVE.         REMARKS         ANALYSIS:         METHANE       0.21       % NORMAL PENTANE       0.00       % OXYGEN       0.00       %         ETHANE       0.02       % ISOPENTANE       0.00       % ARGON       0.28       %         PROPANE       0.00       % CYCLOPENTANE        % HYDROGEN       0.06       %         NORMAL BUTANE       0.00       % NITROGEN       95.16       % CO2       2.01       %         SPECIFIC GRAV.:       0.959        HELIUM       2.26       %	SHUT IN WELLHEAI	D PRES., P	SIG:	0							
ANALYSIS:         METHANE       0.21       %       NORMAL PENTANE       0.00       %       OXYGEN       0.00       %         ETHANE       0.02       %       ISOPENTANE       0.00       %       ARGON       0.28       %         PROPANE       0.00       %       CYCLOPENTANE        %       HYDROGEN       0.06       %         NORMAL BUTANE       0.00       %       HEXANES PLUS       0.00       %       H2S *       0.00       %         ISOBUTANE       0.00       %       NITROGEN       95.16       %       CO2       2.01       %         SPECIFIC GRAV.:       0.959       USE       USE       HELIUM       2.26       %	CHECK OF DATA - () WITHOUT C	THE WELL	L DA' ON, (	TA ARE ACC	CURATE, DRRECTED	ABOVE.					
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PROPANE       0.00 %       CYCLOPENTANE       %       HYDROGEN       0.06 %         NORMAL BUTANE       0.00 %       HEXANES PLUS       0.00 %       H2S *       0.00 %         ISOBUTANE       0.00 %       NITROGEN       95.16 %       CO2       2.01 %         SPECIFIC GRAV.:       0.959        HELIUM       2.26 %	METHANE	0.21	%	NORMAL I	PENTANE	0.00	%	OXYGE	N	0.00	%
NORMAL BUTANE         0.00         %         HEXANES PLUS         0.00         %         H2S *         0.00         %           ISOBUTANE         0.00         %         NITROGEN         95.16         %         CO2         2.01         %           SPECIFIC GRAV.:         0.959         HELIUM         2.26         %	ETHANE	0.02	%	ISOPENTA	NE	0.00	%	ARGON		0.28	۳⁄6
ISOBUTANE         0.00 % NITROGEN         95.16 %         CO2         2.01 %           SPECIFIC GRAV.:         0.959         HELIUM         2.26 %	PROPANE	0.00	%	CYCLOPE	NTANE		%	HYDRO	GEN	0.06	¶⁄n
SPECIFIC GRAV.: 0.959 HELIUM 2.26 %	NORMAL BUTANE	0.00	%	HEXANES	PLUS	0.00	%	H2S *		0.00	٩⁄٩
	ISOBUTANE	0.00	%	NITROGE	N	95.16	%	CO2		2.01	%
TRACE DENOTES COMPONENTS < 0.005%TOTAL100.00%	SPECIFIC GRAV .:	0.959						HELIUM	ļ	2.26	٩/٩
	TRACE DENOTES C	COMPONE	NTS	< 0.005%				TOTAL		100.00	•⁄ո

CALCULATED GROSS BTU/CU. FT., DRY AT 60 DEG. F AND 30 IN MERCURY: 3

\* DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE.

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COMPANY

BY \_\_\_\_\_

TITLE \_\_\_\_\_

10. In comp Primero Operatinc, Inc. No. 1 Cat Head Mesa Unit Atoka Formation 4202-12', 4218-38' Report Date: 05/02/2002 11:00:46 Source: cat head unit Station #: Sample Date: 020502 Station Name: Flowing Pressure: 0 psig Field: Flowing Temp.: 0 F Method: c:\mti\ezchrom\400\methods\FUELGAS.MET File: c:\mti\ezchrom\400\chrom\fs20925.1 Gas Analysis by Chromatograph Name Mole \$ BTU RD GPM 0.000 0.000 0.000 Argon 0.000 Nitrogen 5.842 0.000 Methane 0.704 7.124 0.000 Helium 0.231 0.000 0.000 Hydrogen 0.000 0.620 2.014 0.000 92.565 1.407 CO2 0.000 0.000 0.000 Ethane 0.000 0.000 0.000 H25 0.000 0.000 0.000 Fropane 0.009 0.293 0.000 0.003 i-Butane 0.458 0.000 0.005 n-Butane 0.014 0.000 0.001 0.004 0.160 i-Fentane 0.121 0.000 0.001 0.003 n-Pentane

0.381

0.000

0.004

Ideal Total 100.000 10.552 1.408 0.014 Unnormalized Total 102.271

0.008

Hexanes+

 Gross BTU/Real Cu. Ft.
 Gasoline Content

 (@ 60 deg F, 14.696)
 Propane GPM = 0.000

 Dry = 10.604
 Butane GPM = 0.000

 Sat. = 11.306
 Gasoline GPM = 0.011

 Actual = 10.604
 26# Gasoline GPM = 0.011

 ( 0.000 lbs. water/MMCF)
 Total GPM = 0.014

Real Relative Density Calculated = 1.4140 On-Site Relative Density = 0.0000

Gas Compressibility = 0.9951

Remarks:	Looks	like a	pel	andysis	- 776	Drugg	
			(	<u> </u>			

### **PRIMERO OPERATING, INC.** PO BOX 1433, ROSWELL, NM 88202-1433 (505)622-1001

### CONFIDENTIAL

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CATHEAD MESA UNIT #1 Section 8, T4S, R9E Socorro County, NM

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### DAILY OPERATIONS REPORT

4/04/02:	Prepare for Re-Completion
	T&C Anchor Service trucked in and set a 500 bbl Frack tank and installed anchors
4/05/02:	Prepare for Re-Completion
	Morgan Services dug out the cellar and a work over pit then welded on 13 3/8" flange.
4/08/02:	Prepare for Re-Completion
	MIRU Key Well Services pulling unit and WRH tool company reverse unit. Fill frack tank and reverse tank with water and RIH w/ bit and collars. NU BOP and prepare to begin drilling first plug first thing Tuesday.
4/09/02:	Estimated cumulative cost \$25,000 Drilling plugs
	RIH w/ 5 drill collars and 12 1/4" bit. Tagged first plug at 610'. Drilled 60' of soft cement and then hit obstruction at 670', drill string started to torque badly. POH to inspect bit, it was scarred up. WO 3 hours for magnet. RIH w/ 5" magnet and bent sub. Made 4 magnet runs recovering 4 pieces of iron ranging from 2" to 8" long, it appears to be 13 3/8" casing which had been trimmed when the dry hole marker was installed. Lay down magnet and RIH w/ bit. Continued drilling first plug to 730' and SDFN
4/10/02:	Estimated cumulative cost \$30,535 Drilling plugs
	Drilled first plug from 730' to fall out at 1162'. RIH cleaning out hole to 1247'. Open hole section is full of mud and red bed cuttings. Pull drill string up inside 13 3/8" casing and SDFN
	Estimated cumulative cost \$36,835
4/11/02:	Drilling plugs
	Overnight, the hole took approximately 85 bbls of water. RIH and drill out several red bed bridges to get back to 1162'. Clean out the hole and tag second plug at 1540'. Drilled second plug down to 1622', pull up into casing and SDFN.
4/12/02:	Estimated cumulative cost \$42,532 Drilling plugs

Drilled second plug from 1540' to 1682', Attempted to Pull drill string into casing bu the bit would not pull into the casing. Work pipe from 7:00 to 9:30 to pull bit into casing. SDFN

Estimated cumulative cost \$51,882 4/13/02: **Drilling plugs** RIH drilling out bridge under surface casing. Drilled second plug from 16822' to 1684' and hit 9 5/8" cutoff. POH w/ no drag. RIH w/ 8 3/4" bit, drilled out approximately 2' of cement then fell through clean pipe. RIH 2 joints, circulate hole clean and POH w/ drill string. Trucked to location and unloaded 1750' of 9 5/8" casing. SDFWE Estimated cumulative cost \$73,712 4/15/02: Milling 9 5/8" RIH w/ 8 ¾" bit, 6' Drill collar and 11 ¾" flat mill. Reamed through spot below 13 3/8" casing and RIH to 9 5/8" stub. Start milling stub at 4:30 pm, milled 1' of stub by 8:30 pm. Circulate hole 45 minutes and POH w/ mill. RIH w/ 12 1/4" bit, it went straight to bottom without drag. Called casing crew, circulate and wait on casing crew 6 hours. POH w/ drill sting and RIH w/ 9 5/8" casing Estimated cumulative cost \$80,972 4/16/02: Run 9 5/8" casing MIRU Bull Rogers Casing crew. RIH w/ 12 1/4" X 9 3/4" casing shoe and used 9 5/8" 36# casing. Passed through the worst part of the hole but the casing would not run past 1580', reamed for 4 hours with very little progress (assume crooked hole). Pulled 10 joints and shut down for night, WOO Estimated cumulative cost \$86,102 4/17/02: Pull 9 5/8" casing MIRU Bull Rogers Casing crew. POH w/ 9 3/4" casing. RIH w/ 8 3/4" bit drilled through several bridges and cleaned out the hole to 3820". Trucked in 4300" of used 5 1/2" blue band casing. Load and truck off 9 5/8" casing. SDFN Estimated cumulative cost \$93,822 4/18/02: Drill last plug Drill on cement but quit making hole and encountering torque at 3830'. POH w/ bit, several teeth were broken off. RIH w/ magnet wash down 1 joint, circulate bottoms up and POH w/ magnet, found several pieces of metal, smaller pieces were similar to the ones found on first plug, others were stainless steal strips 1/4" X 1/16" and various lengths. RIH w/ new bit and begin drilling plug at 7:30 pm. Drilled slowly with torque until 11:30 pm then the cement started drilling quickly. Estimated cumulative cost \$101,928 4/19/02: Run 5 1/2" casing Dropped through last plug at 3940' at 1:00 am. When the bit dropped through, the hole immediately started taking fluid. Shut down pumps and POH w/ drill string. SD waiting

immediately started taking fluid. Shut down pumps and POH w/ drill string. SD waiting on casing crew at 2:30 am. MIRU Bull Rogers casing crew and BJ Services. RIH w/ 132 jts used blue band K-55 casing w/ cement guide shoe, insert float and 8 centralizers. Landed shoe at 4359' and float @ 4317. RDMO Bull Rogers. Cement well as follows. Pumped 20 bbl gel w/ cedar fiber, broke circulation with 351 bbls. Cemented well with \_415 sx 50-50-2C+5%FL+5% salt+5#LCM-1 cement, During the jobs the returns

	$\bigcirc$	()
	diminished and the last 30 bbls of displacen pressured casing at 5:30 pm. Final different and SD until Tuesday.	nent had no returns, bumped plug and tial pressure was 250 psi. RDMO BJ Services
4/23/02:	Log and perforate	Estimated cumulative cost \$123,669
	Cut off 5 1/2" casing and weld on bell nipple Schlumberger. Run CBL and found PBTD ( poor bond from TOC down. RIH and perfor unit operator 4 hours. Pump 40 bbls down of	@ 4330', and TOC @ 3900' with excellent to prate 4 squeeze holes at 3880'. WO reverse
4/24/02:	Re-cement 5 1/2" casing	Estimated cumulative cost \$135,871
	RIH w/ cement retainer and set at 3840'. M well with 200 sx class C plus 1% CaCl, fina retainer at 11:30 am and reverse tubing to p	
4/25/02:	Drill out retainer	Estimated cumulative cost \$150,806
	RIH w/ bit and collars. Drill out retainer an Shut down to allow cement to cure longer.	nd 15' of cement. The cement is still green.
		Estimated cumulative cost \$154,806
4/29/02:	Perforate Atoka	
		TD. Circulate hole w/2% KCl water and POH rger and run CBL, found PBTD @ 4333' and 4218' – 4238' w/2 SPF. RDMO 92'.
		Estimated cumulative cost \$159,306
4/30/02:	Swabbing Atoka	
	swabbed 150 barrels, fluid is cut w/some so	n 3 runs, on the $4^{th}$ run fluid rose 800', ell stayed @ 3000 – 3200' throughout the day, rt of gas but no hydrocarbon odors, filled up t water sample to BJ, caught one sample in gas
		Estimated cumulative cost \$164,156
5/01/02:	Swabbing Atoka	
		swabbed 140 bbls fluid. The fluid is gas cut ne gas and fluid and we should have analysis om surface. SDFN @ 5:00 pm
		Estimated cumulative cost \$167,446

5/02/02: Perforate Abo ITP vacuum, unset packer and POH w/tubing. MIRU Schlumberger and perforate the Abo w/2 spf as follows: 3690-3700' 3720-3737 3792-3823' RDMO Schlumberger and SDFN Estimated cumulative cost \$172,436 5/03/02: Swab Abo ITP vacuum, RIH w/RBP and packer. Set RBP at 4005' and packer at 3754'. IFL 3000' from surface. Swabbed well down in 2 runs, wait one hour and still no fluid. Unset packer, move up to and set at 3571'. Swabbed well dry. SDFWE. Estimated cumulative cost \$180,776 5/06/02: Acidize Abo ITP 100 psi, blew pressure down but gas would not burn. IFL 3180' from surface. MIRU BJ Services and acidize well with 5,000 gallons 71/2% NEFE and 150 ball sealers. Breakdown pressure 2377 psi Average pressure 2250 psi @ 9.8 bpm 2377 psi @ 9.8 bpm Max pressure ISDP 228 psi 110 psi 5 min SIP 10 min SIP 92 psi 75 psi 15 min SIP Total Load 118 bbls Start swabbing well at 10:45 am IFL surface. Swabbed 100 bbls of fluid through 3:00 pm. Final fluid level at seating nipple. Wait one hour and recover approximately 200' of fluid. No blow. SDFN. Estimated cumulative cost \$196,366

5/07/02: Swab

ITP 120 psi, blew pressure down but gas would not burn. IFL 2500' from surface. Swabbed well to seating nipple in 3 runs. Started swabbing once per hour recovering 120' of fluid per run. SDFN.

Estimated cumulative cost \$198,996

ITP vacuum, RIH w/ RBP and packer. Set RBP at 4005' and packer at 3754'. IFL 3000' from surface. Swabbed well down in 2 runs, wait one hour and still no fluid. Unset packer, move up to and set at 3571'. Swabbed well dry. SDFWE

5/06/02: Acidize Abo

ITP 100 psi, Blew pressure down but gas would not burn. IFL 3180' from surface. MIRU BJ Services and acidize well with 5,000 gallons 7  $\frac{1}{2}$ % NEFE and 150 ball sealers.

Breakdown pressure	2377 psi
Average pressure	2250 psi @ 9.8 bpm
Max pressure	2377 psi @ 9.8 bpm
ISDP	228 psi
5 min SIP	110 psi
10 min SIP	92 psi
15 min SIP	75 psi
Total load	118 bbls

Start swabbing well at 10:45 am, IFL surface. Swabbed 100 bbls of fluid through 3:00 pm. Final fluid level at seating nipple. Wait one hour and recover approximately 200' of fluid. No blow. SDFN

5/07/02: Swab

Estimated cumulative cost \$196,366

Estimated cumulative cost \$198,996

ITP 120 psi, Blew pressure down but gas would not burn. IFL 2500' from surface. Swabbed well to seating nipple in 3 runs. Started swabbing once per hour recovering 120' of fluid per run. SDFN.

5/08/02: SI WOO

The rig was on standby today, waiting for a decision on what to do next.

WG Energy has decided not to participate in the test of the Tertiary sill. Since WG is a large owner in the well, we have decided to pull the rental tools out of the hole tomorrow then RIH w/ the tubing and Rig down and move out the Pulling unit.

Estimated cumulative cost \$200,000

Estimated cumulative cost \$180,776

### STIMULATION TREATMENT REPORT

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			STIMULA	TION TR	EATMENT	REPORT		<b>र</b> ्भ	Ŀ
ate <u>06-MA</u> ease Cat Hea		District Art	esia		.Receipt <u>27</u> Well Name	2310511 Cat Head Dr	Customer aw #1	Primero Oper	ating Inc
ield					Location		······		
ounty Socorro	0	State New	Mexico	St	age No	1	_ Well API		
WELL DAT		OLD	Well Cla			Depth TD/F	B: <u>4005</u>	Formation:	
Geometry Typ			Weight	ID Gra		Bottom		Perf Interval	-
UBULAR UBULAR	TBG CSG	2.875 5.5		2.441 J-5 4.892 J-5		3571	Тор	Bottom SP	F Diameter
UBULAR	036	5.5	17 -	4.092 J-0	50 35/1	4005	3680	3823	1.4
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		_			4. u		-	8	
acker Type_/		Packer D	epth <u>3571</u>	F1	T				
REATMENT	<del></del>			<u>ــــــــــــــــــــــــــــــــــــ</u>	· - · · · ·			04040	PUMPED AND ITIES IN BBLS
	Fluid Des	c Pump	ed Volume(G	······································	p. Description	Volur	ne Pumped(Lbs	2	
REATMENT FLU	D 7.5% Hcl		4	4,000 NO F	PROPPANT			Tubing Cap. Casing Cap.	
					101	al Prop Oty:		Annular Cap.	
								Open Hole C	
								Fluid to Load	
						ν.		Pad Volume	
	ment			evious Produc		N/A		Treating Fluid	
ole Loaded V			eat Via: Tubin	- <u>-</u> ···,	ig Anul.		Anul.	Flush	
	<u>150</u> In		ages Type	······	7/8 in. 1.3	sp gr. R		Overflush	0
	riale CL27 INELO-15		EE.071						
uxiliary Mater		50, NE-940, FE-270,	-271	······		<u>.</u>		Fluid to Reco	ver118.1
Auxiliary Mater		00, INE-940, FE-270,		PROCE	OURE SUMM	ARY		Fluid to Reco	ver <u>118.1</u>
Auxiliary Mater Time AM/PM	Treating Pres		Surface BBLS. P	Siurry	DURE SUMM Slurry Rate BPM	ARY	Com	Fluid to Reco ments	ver <u>118.1</u>
Time			Surface BBLS. P Stage	Slurry rumped Total	Slurry Rate				ver <u>118,1</u>
Time AM/PM 07:15	Treating Pres	ssure-Psi Annulus Q	Surface BBLS. P Stage 0	Slurry rumped Total 0	Slurry Rate BPM	Arrive On Loc	ation.		ver <u>118,1</u>
Time AM/PM 07:15 09:36	Treating Pres	ssure-Psi Annulus 0 0	Surface BBLS. P Stage 0 0	Slurry umped Total 0 0	Slurry Rate BPM 0	Arrive On Loc Load Backsid	ation.		ver118.1
Time AM/PM 07:15	Treating Pres	ssure-Psi Annulus Q	Surface BBLS. P Stage 0	Slurry rumped Total 0	Slurry Rate BPM	Arrive On Loc	ation.		ver118.1
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B J Services Water Analysis Permian Region Laboratory (915) 530-2667											
Date: 1-May-02	Test #:										
Company: Primero	Well #:	1									
.case: Cal Head Meso	County: S	ocorro									
itate: N.M.	Formation A	loka									
Japth:	Source:										
fax: 505-625-0227		helps White									
		'emp (F):	58								
Specific Gravity 1.0	45										
PATIONS		me/l	A.F								
CATIONS	mg/i 24920	1081.8	ppm 237 <b>9</b> 9								
Sodium (calc.)	24870										
Calcium	1163	58.0	1113								
Magnesium	340 < 25	28.0	326								
Barium Potossium	< 25 < 10										
Potassium Iron	< 10	1.9	50								
ir un	23	1.7	30								
ANIONS											
Chlaride	38200	1105.8	37512								
Bulfate	525	11.0	504								
Carbonate	< 1										
Bicarbenate	3489	57.2	3339								
Tomi Dissolved Solids(calc.)	69641		85642								
Total Hardness as CaCO3	4305	85.C	4119								
COMMENTS: Rw SCALE ANALYSIS: CaCO3 Factor 4057	591 Calcium Carbo	Secto Secto Busic		Probable							
	595 Calcium Sulful			Remote							
Mar Mahagaga Mila, ay il Qalanti, Miyaka ay ay affahanan ana ana dina ana ay	Still P	lot									
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Mg harris											

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	V		Atto: Fax #		Phelps White 6 <b>25-</b> 0227	<del>)</del>	
BJS	ervice	es Wate					
•	esia	District 505)-746-31	Laboratory	•			
Date: 2-May-02 Company Primero Lease: Cat Head Mesa	۱ ر	fest #: Nell #: County:	#1 Socorro				
State: NM Depth:		Formation: Bource:	Alloka Grab				
pH Specific Gravity	6.94 1.055		Tem	<u>;(7) c</u>	64		
CATIONS		mg/l		me/l	ppm		
Sodium (calc.)		30 <b>766</b>	1:	338,2	29162		
Calcium		1243		62.0	1178		
Magneslum		316 < 25		26.0	299		
Barium Potassium		< 25 < 10					
Iron		1		0.0	1		
ANIONS							
Chloride		46000	1:	297.6	43602		
Sulfate		190		3.9	180		
Carbonate		1 > 7020			7517		
Bicarbonate		7930		130.0	7317		
Total Dissolved Solids(ca	llc.)	86445			81938		
Total Hardness as CaCO	3	4405		88.0	4175		
COMMENTS:							
SCALE ANALYSIS:							
CaCO3 Factor 9		Calcium Carbo Calcium Sulfat				,	Probal Remol
	<b></b>	Stiff	Plot		,		
	40 30	20 10	00 10	20		50 60	
Mo					604		
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### Laboratory Services, Inc. 4016 Fiesta Drive



4016 Fiesta Drive Hobbs, New Mexico 88240 Telephone: (505) 397-3713

### Water Analysis

COMPANY I	Primero	Operating			
					····
SAMPLE	Cathead	Mesa #1			
SAMPLED BY					
DATE TAKEN	5/7/02				
REMARKS	3570'	Abo			with the presidence compart metric on the proper profile to referre
		·			
Barium as Ba				·	
Carbonate alkalinit		····	0		
Bicarbonate alkalin			0		
pH at Lab	ILY FFIN		652		· · · · · · · · · · · · · · · · · · ·
Specific Gravity @	60°E	·	5.4		
Magnesium as Mg	001		<u>1.11</u> 20,706		
Total Hardness as	CaCO3		35,700		
Chlorides as Cl			96,016		
Sulfate as SO4			1,575		
Iron as Fe		····	325		
Potassium		······································	22		annan an a
Hydrogen Sulfide		• • • • • • • • • • • • • • • • • • •			
Rw			0.085	)	@ 22° C
Total Dissolved Sc	olids	· · · · · · · · · · · · · · · · · · ·	134,400	The Lord Contraction of the Lo	
Calcium as Ca			14,994		
Nitrate			297		
		······································			
	······································				
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Doguite reported on De	to por Milli				
Results reported as Pa		#I UNIESS STATED			
Langelier Saturatio			~ 1		
Langelier Saturatio			0.1		

Analysis by: Date: Vickie Biggs 5/8/02

CONFIDE Schlumb		GEOFRAME PROCESSE INTERPRET	D
		E COME	
		T HEAD MESA	*A Mark of Schlumberger
WIL Using the follow		THEADMESA	*A Mark of Schlumberger
	ing logs: LD MANZANO OIL ( CAT HEAD MES WILDCAT SOCORRO	T-CNL-GR-BHC-DLL- CORPORATION	*A Mark of Schlumberger
Using the follow COMPANY: WELL:	ing logs: LD MANZANO OIL ( CAT HEAD MES WILDCAT	T-CNL-GR-BHC-DLL- CORPORATION	*A Mark of Schlumberger MSFLS

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