

DATE IN 4/14/10	SUSPENSE	ENGINEER DB	LOGGED IN 4/14/10	TYPE NSL	APP NO. 1010330752
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ABOVE THIS LINE FOR DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION  
- Engineering Bureau -  
1220 South St. Francis Drive, Santa Fe, NM 87505



OKY  
Fed 29 #11  
31698

**ADMINISTRATIVE APPLICATION CHECKLIST**

THIS CHECKLIST IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

30-215-6180

RECEIVED OGB  
APR 12 P 1:01

Sac 29/235/31E  
(w/2 Sac 29)  
proj area  
for oil well

**Application Acronyms:**

[NSL-Non-Standard Location] [NSP-Non-Standard Proration Unit] [SD-Simultaneous Dedication]  
[DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling]  
[PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]  
[WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]  
[SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]  
[EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]

[1] **TYPE OF APPLICATION** - Check Those Which Apply for [A]

- [A] Location - Spacing Unit - Simultaneous Dedication  
☒ NSL ☐ NSP ☐ SD

Check One Only for [B] or [C]

- [B] Commingling - Storage - Measurement  
☐ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM

- [C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery  
☐ WFX ☐ PMX ☐ SWD ☐ IPI ☐ EOR ☐ PPR

- [D] Other: Specify \_\_\_\_\_

[2] **NOTIFICATION REQUIRED TO:** - Check Those Which Apply, or Does Not Apply

- [A] ☒ Working, ~~Royalty or Overriding Royalty~~ Interest Owners  
[B] ☒ ~~Offset Operators, Leaseholders or Surface Owner~~  
[C] ☐ Application is One Which Requires Published Legal Notice  
[D] ☒ Notification and/or Concurrent Approval by BLM or SLO  
U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office  
[E] ☐ For all of the above, Proof of Notification or Publication is Attached, and/or,  
[F] ☐ Waivers are Attached

[3] **SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED ABOVE.**

[4] **CERTIFICATION:** I hereby certify that the information submitted with this application for administrative approval is **accurate** and **complete** to the best of my knowledge. I also understand that **no action** will be taken on this application until the required information and notifications are submitted to the Division.

~~Note: Statement must be completed by an individual with managerial and/or supervisory capacity.~~

David Stewart  
Print or Type Name

*David Stewart*  
Signature

Sr. Reg. Analyst  
Title

4/8/10  
Date

david\_stewart@oky.com  
e-mail Address

OKY USA Inc.  
Federal 29 #11



**OXY USA Inc.**

**PO Box 50250  
Midland, TX 79710-0250**

April 8, 2010

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

Attention: Richard Ezeanyim

Re: *Application for Administrative Approval of Non-Standard Location –  
Sand Dunes Delaware, West  
Federal 29 #11  
Surface/Penetration Point – 1930 FNL 1650 FEL Ut G  
Bottom Hole – 1849 FNL 713 FWL Ut E  
Section 29 T23S R31E  
Eddy County, New Mexico*

Dear Mr. Ezeanyim:

OXY USA Inc. respectfully requests administrative approval under Rule 104 (F) of this application for the subject non-standard well location on the Federal 29 #11. The #11 well is proposed in the Delaware with a TVD of 8000'. The kickoff point for the well is at approximately 4200' and the top of the Delaware formation is expected at 4035', which is above the kickoff point. The wellbore will be at an orthodox location when it penetrates the Delaware Brushy Canyon reservoir, but will not be orthodox at the top of the Delaware. The non-standard location is necessary for reasons of potash surface restrictions and topography, as required by the BLM.

The #11 encroaches on the 40-acre spacing unit of E, F, G of 29-23S-31E. All of the interest owners have joined in the drilling of the #9 and waivers have been attached.

To support this request, the following information has been submitted for your review:

1. Application for Permit to Drill.
2. NMOCD C-102 Plat for the proposed well with offsetting well and affected spacing units.
3. List of affected offset parties that adjoin the non-standard well and the spacing unit being encroached upon, along with a copy of the certified returned receipts and signed waivers. Copies of the signed certified receipts will be furnished upon request.
4. Proposed Directional Survey

If you need any additional information, please call me at 432-685-5717.

Sincerely,

David Stewart  
Sr. Regulatory Analyst  
OXY USA Inc.

Attachments

CC: NMOCD-Artesia, BLM-Carlsbad, Service List

LM

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

Operator Copy

FORM APPROVED  
OMB NO. 1004-0136  
Expires: November 30, 2000

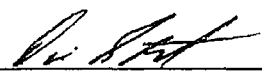
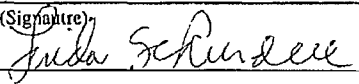
APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NMNM0545035
1b. Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name
2. Name of Operator OXY USA Inc.		7. Unit or CA Agreement Name and No.
3a. Address P.O. Box 50250 Midland, TX 79710-0250	3b. Phone No. (include area code) 16696 432-685-5717	8. Lease Name and Well No. Federal 29 #11
4. Location of Well (Report location clearly and in accordance with any State requirements)* At surface 1930 FWL 1650 FEL SWNE(G) At proposed prod. zone 1349 FWL 713 FWL SWNW(E)		9. API Well No. 30-015-37698
14. Distance in miles and direction from nearest town or post office* 20 miles northeast from Loving, NM		10. Field and Pool, or Exploratory Sand Dunes Delaware, West
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drg. unit line, if any) 713'		11. Sec., T., R., M., or Blk. and Survey or Area Sec 27 T23S R31E
16. No. of Acres in lease 320		12. County or Parish Eddy
17. Spacing Unit dedicated to this well 320		13. State NM
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 50'		20. BLM/BIA Bond No. on file ES0136
19. Proposed Depth 9031' R6 # 1416 9100' M 3000' V		
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3344.3' GL		22. Approximate date work will start* 23. Estimated duration 45

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, shall be attached to this form:

- |   |  |
|---|--|
| 1. Well plat certified by a registered surveyor.  | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).    |
| 2. A Drilling Plan  | 5. Operator certification.   |
| 3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office). | 6. Such other site specific information and/or plans as may be required by the authorized officer. |

25. Signature 	Name (Printed/Typed) David Stewart	Date 9/2/09
Title Sr. Regulatory Analyst		
Approved by (Signature) 	Name (Printed/Typed) Linda S. C. Rundell	Date 2/5/10
Title STATE DIRECTOR	Office NM STATE OFFICE	

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.  
Conditions of approval, if any, are attached.

APPROVAL FOR TWO YEARS

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

\*(Instructions on Reverse)

CARLSBAD CONTROLLED WATER BASIN

SEE ATTACHED FOR  
CONDITIONS OF APPROVAL

APPROVAL SUBJECT TO  
GENERAL REQUIREMENTS  
AND SPECIAL STIPULATIONS  
ATTACHED

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, Artesia, NM 88210  
District III  
1000 Rio Brazos Rd., Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals & Natural Resources Department  
OIL CONSERVATION DIVISION  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-102  
Revised October 12, 2005  
Submit to Appropriate District Office.  
State Lease- 4 Copies  
Fee Lease- 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number <b>30-015-</b>	Pool Code <b>53815</b>	Pool Name <b>Sand Dunes Delaware, West</b>
Property Code <b>304820</b>	Property Name <b>FEDERAL 29</b>	Well Number <b>11</b>
OGRID No. <b>116696</b>	Operator Name <b>OXY USA INC.</b>	Elevation <b>3344.3'</b>

Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
<b>G</b>	<b>29</b>	<b>23 SOUTH</b>	<b>31 EAST, N.M.P.M.</b>		<b>1930'</b>	<b>NORTH</b>	<b>1650'</b>	<b>EAST</b>	<b>EDDY</b>

Bottom Hole Location If Different From Surface

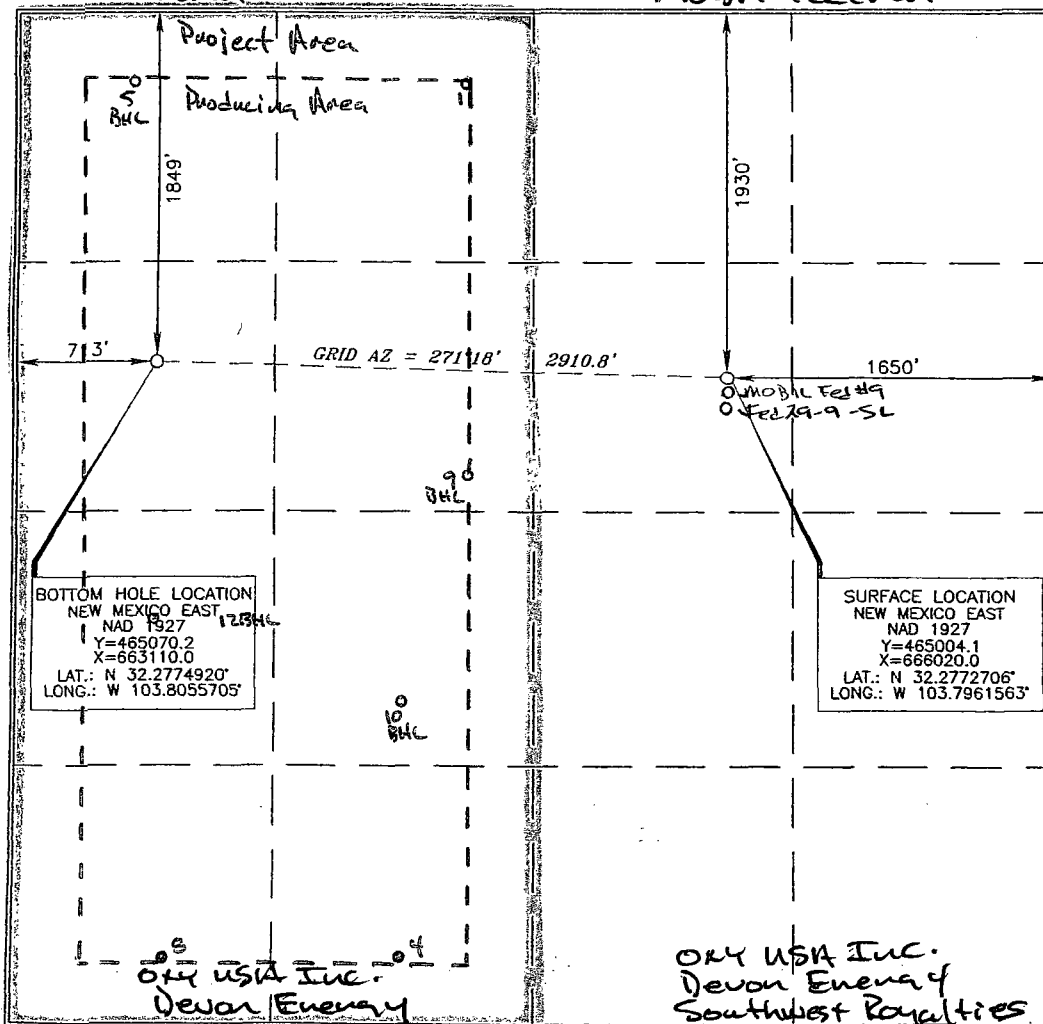
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
<b>E</b>	<b>29</b>	<b>23 SOUTH</b>	<b>31 EAST, N.M.P.M.</b>		<b>1849'</b>	<b>NORTH</b>	<b>713'</b>	<b>WEST</b>	<b>EDDY</b>

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
<b>320</b>	<b>Y</b>		

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

**Federal 29**

**Mobil Federal**



OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

**David Stewart** 9/9/09  
Signature Date

**David Stewart**  
Printed Name

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

**15079**  
APRIL 29, 2009  
Date of Survey

Signature and Seal of Professional Surveyor

**Terry J. Paul** 8/31/2009  
Certificate Number 15079

**Service List – NSL  
OXY USA Inc.  
Federal 29 #11  
Sec 29 T23S R31E**

United States Dept of Interior  
Bureau of Land Management  
620 E. Greene Street  
Carlsbad, NM 88220-6292

New Mexico Oil Conservation Division  
1301 W. Grand Ave.  
Artesia, NM 88210

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

**Affected Offset Parties:**

Devon Energy Production Co., LP  
Attn: Mr. Ken Gray  
20 N. Broadway  
Oklahoma City, OK 73102

Southwest Royalties Inc.  
Attn: Mr. Randy Howard  
6 Desta Drive, Suite 2100  
Midland, TX 79705



**OXY USA Inc.**

PO Box 50250  
Midland, TX 79710-0250

April 8, 2010

CERTIFIED MAIL – RETURN RECEIPT REQUESTED

Devon Energy Production Co., LP  
Attn: Ken Gray  
20 N. Broadway  
Oklahoma City, OK 73102

Re: *Application for Administrative Approval of Non-Standard Location –  
Sand Dunes Delaware, West  
Federal 29 #11  
Surface/Penetration Point – 1930 FNL 1650 FEL Ut G  
Bottom Hole – 1849 FNL 713 FWL Ut E  
Section 29 T23S R31E  
Eddy County, New Mexico*

Ladies and Gentlemen:

Enclosed is a copy of an application, filed with the New Mexico Oil Conservation Division by OXY USA Inc., requesting administrative approval under Rule 104 (F) of an unorthodox well location. As an affected party, notice is being provided to you pursuant to Rule 104 (F). The well is located in the SWNE/4 of Section 29 T23S R31E, Eddy County, NM. If you object to the well's location, you must notify the Division in writing no later than 20 days from the date the application is received by the NMOCD (1220 South St. Francis Drive, Santa Fe, NM 87505; Attention: Richard Ezeanyim).

If you need any additional information, please call me at 432-685-5717.

Sincerely,

A handwritten signature in black ink, appearing to read "David Stewart".

David Stewart  
Sr. Regulatory Analyst  
OXY USA WTP LP

Attachments



**OXY USA Inc.**

A subsidiary of Occidental Petroleum Corporation

5 Greenway Plaza, Suite 110, Houston, Texas 77046-0521  
P.O. Box 27570, Houston, Texas 77227-7570  
Phone 713.215.7000

February 24, 2010

Ken Gray  
Devon Energy Production Company, LP  
20 North Broadway  
Oklahoma City, OK 73102

RE: **Federal 29 #11 Well**  
Surface Location 1,930' FNL & 1,650' FEL (SWNE)  
Bottom Hole Location 1,849' FNL & 713' FWL (SWNW)  
Section 29-23S-31E  
Eddy County, New Mexico

Gentlemen:

The surface location for the Federal 29 #11 well is located 1,930' FNL & 1,650' FEL in the SW/4 NE/4 and the bottom hole location is 1,849' FNL & 713' FWL in the SW/4 NW/4 of Section 29-23S-31E, Eddy County, NM. This location is an unorthodox location for the objective Delaware formation.

OXY is filing an application with the New Mexico Oil Conservation Division (OCD) for administrative approval of this non-standard location (NSL). The owners of the Mobil Federal lease covering the E/2 of Section 29-23S-31E are the only affected parties entitled to notice. Your execution of this waiver will facilitate administrative approval of OXY's NSL application. OXY requests that you waive any protest or objection to the NSL for the referenced well.

Your favorable consideration and early reply will be appreciated. Please return a signed copy of this waiver letter to me at the address shown above.

Very truly yours,

OXY USA Inc.

Donna G Havins  
Land Negotiator  
Dir: (713) 215-7232  
Cell: (713) 202-7559  
Fax: (713) 985-1818  
email: donna\_havins@oxy.com

**Devon Energy Production Company, LP hereby waives any protest or objection to the non-standard location of the Federal 29 #11 well.**

Devon Energy Production Company, LP

By

Dated 3/2/10



**OXY USA Inc.**

PO Box 50250  
Midland, TX 79710-0250

April 8, 2010

CERTIFIED MAIL – RETURN RECEIPT REQUESTED

Southwest Royalties Inc.  
Attn: Mr. Randy Howard  
6 Desta Drive, Suite 2100  
Midland, TX 79705

Re: *Application for Administrative Approval of Non-Standard Location –  
Sand Dunes Delaware, West  
Federal 29 #11  
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David Stewart  
Sr. Regulatory Analyst  
OXY USA WTP LP

Attachments





**OXY USA Inc.**

A subsidiary of Occidental Petroleum Corporation

5 Greenway Plaza, Suite 110, Houston, Texas 77046-0521  
P.O. Box 27570, Houston, Texas 77227-7570  
Phone 713.215.7000

February 24, 2010

Randy Howard  
Southwest Royalties Inc.  
#6 Desta Drive, Suite 2100  
Midland, TX 79705

RE: **Federal 29 #11 Well**  
Surface Location 1,930' FNL & 1,650' FEL (SWNE)  
Bottom Hole Location 1,849' FNL & 713' FWL (SWNW)  
Section 29-23S-31E  
Eddy County, New Mexico

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OXY is filing an application with the New Mexico Oil Conservation Division (OCD) for administrative approval of this non-standard location (NSL). The owners of the Mobil Federal lease covering the E/2 of Section 29-23S-31E are the only affected parties entitled to notice. Your execution of this waiver will facilitate administrative approval of OXY's NSL application. OXY requests that you waive any protest or objection to the NSL for the referenced well.

Your favorable consideration and early reply will be appreciated. Please return a signed copy of this waiver letter to me at the address shown above.

Very truly yours,

OXY USA Inc.

Donna G Havins  
Land Negotiator  
Dir: (713) 215-7232  
Cell: (713) 202-7559  
Fax: (713) 985-1818  
email: donna\_havins@oxy.com

Southwest Royalties Inc hereby waives any protest or objection to the non-standard location of the Federal 29 #11 well.

Southwest Royalties Inc.

By

Dated

2/24/10



Azimuths to Grid North  
True North: -0.29°  
Magnetic North: 7.61°  
  
Magnetic Field  
Strength: 48832.6snT  
Dip Angle: 60.26°  
Date: 2009/08/27  
Model: IGRF200510



Project: Eddy County, NM  
Site: Sand Dune Fed 29 #11  
Well: Well #11  
Wellbore: OH  
Plan: Plan #1 (Well #11/OH)

WELL DETAILS: Well #11

Ground Elevation: 3344.30  
RKB Elevation: RKB to MSL @ 3360.80ft  
Rig Name:

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	465004.10	666020.00	32° 16' 38.17389 N	103° 47' 46.16305 W	

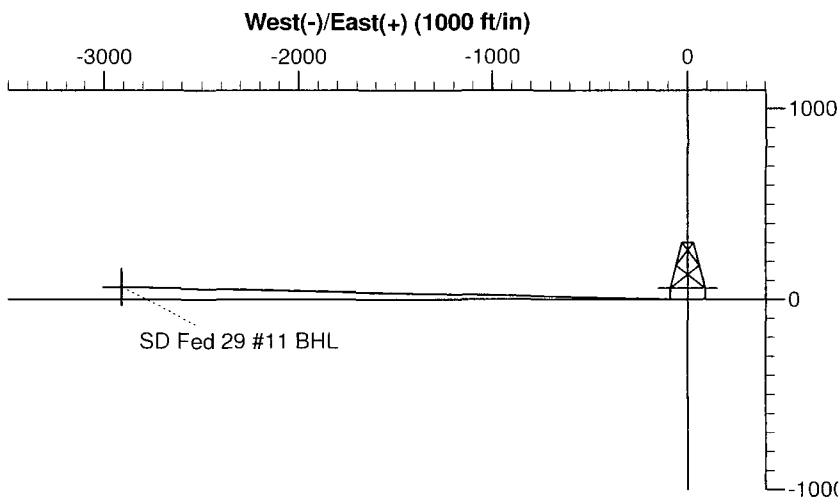
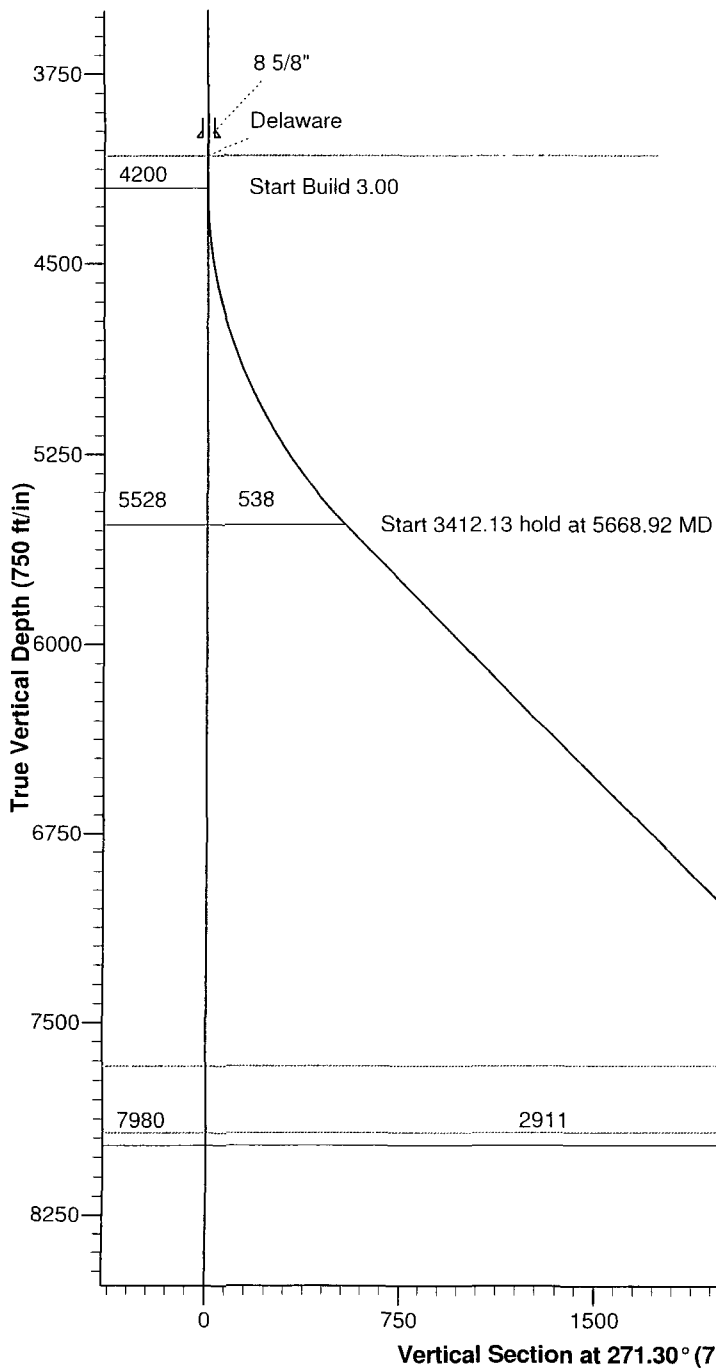
CASING DETAILS			
TVD	MD	Name	Size
4000.00	4000.00	8 5/8"	8-5/8

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	4200.00	0.00	0.00	4200.00	0.00	0.00	0.00	0.00	0.00	
3	5668.92	44.07	271.30	5528.32	12.21	-537.45	3.00	271.30	537.59	
4	9081.05	44.07	271.30	7980.00	66.10	-2910.00	0.00	0.00	2910.75	SD Fed 29 #11 BH

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
SD Fed 29 #11 BHL	7980.00	66.10	-2910.00	465070.20	663110.00	Point



FORMATION TOP DETAILS

TVDPath	MDPath	Formation
4073.20	4073.20	Delaware
7672.20	8652.67	BC A
7929.20	9010.35	Bone Springs

SD Fed 29 #11 BHL

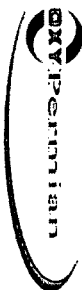
BC A

Bone Springs

TD at 9081.05

PROJECT DETAILS: Eddy County, NM  
Geodetic System: US State Plane 1927 (Exact sol)  
Datum: NAD 1927 (NADCON CONUS)  
Ellipsoid: Clarke 1866  
Zone: New Mexico East 3001

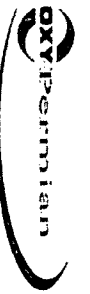
System Datum: Mean Sea Level  
Local North: Grid



PathFinder Energy Services  
Global X&Y Report



<b>Company:</b> OXY Perminian		<b>Local Co-ordinate Reference:</b>	
<b>Project:</b> Eddy County, NM		<b>TVD Reference:</b> RKB to MSL @ 3360.80ft	<b>Well Well #11</b>
<b>Site:</b> Sand Dune Fed 29 #11		<b>MD Reference:</b> RKB to MSL @ 3360.80ft	
<b>Well:</b> Well #11		<b>North Reference:</b> Grid	
<b>Wellbore:</b> OH		<b>Survey Calculation Method:</b> Minimum Curvature	
<b>Design:</b> Plan #1		<b>Database:</b> Landmark Network DB	
<b>Project:</b> Eddy County, NM			
<b>Map System:</b> US State Plane 1927 (Exact solution)		<b>System Datum:</b> Mean Sea Level	
<b>Geo Datum:</b> NAD 1927 (NADCON CONUS)			
<b>Map Zone:</b> New Mexico East 3001			
<b>Site:</b> Sand Dune Fed 29 #11			
<b>Site Position:</b>		<b>Northing:</b> 465,004.10 ft	<b>Latitude:</b> 32° 16' 38.17389 N
<b>From:</b> Map		<b>Easting:</b> 666,020.00 ft	<b>Longitude:</b> 103° 47' 46.16305 W
<b>Position Uncertainty:</b> 0.00 ft		<b>Slot Radius:</b> "	<b>Grid Convergence:</b> 0.29 °
<b>Well:</b> Well #11			
<b>Well Position</b>	<b>+N/S</b> 0.00 ft	<b>Northing:</b> 465,004.10 ft	<b>Latitude:</b> 32° 16' 38.17389 N
<b>+E/W</b> 0.00 ft		<b>Easting:</b> 666,020.00 ft	<b>Longitude:</b> 103° 47' 46.16305 W
<b>Position Uncertainty</b> 0.00 ft		<b>Wellhead Elevation:</b> ft	<b>Ground Level:</b> 3,344.30 ft
<b>Wellbore</b> OH			
<b>Magnetics</b>		<b>Model Name:</b> IGRF200510	<b>Sample Date:</b> 2009/08/27
		<b>Declination</b> (°) 7.90	<b>Dip Angle</b> (°) 60.26
			<b>Field Strength</b> (nT) 48,833
<b>Design</b> Plan #1			
<b>Audit Notes:</b>			
<b>Version:</b>	<b>Phase:</b> PLAN	<b>Tie On Depth:</b> 0.00	
<b>Vertical Section:</b>			
	<b>Depth From (TVD)</b>	<b>+N/S</b> (ft)	<b>+E/W</b> (ft)
	0.00	0.00	0.00
			<b>Direction</b> (°) 271.30
<b>Survey Tool Program</b> Date 2009/08/27			
<b>From</b> (ft)	<b>To</b> (ft)	<b>Survey (Wellbore)</b>	<b>Tool Name</b>
0.00	9,081.05	Plan #1 (OH)	MWD
			<b>Description</b> MWD - Standard



PathFinder Energy Services  
Global X&Y Report



Company: OXY Permian  
Project: Eddy County, NM  
Site: Sand Dune Fed 29 #11  
Well: Well #11  
Wellbore: OH  
Design: Plan #1

Local Co-ordinate Reference:  
TVD Reference:  
MD Reference:  
North Reference:  
Survey Calculation Method:  
Database:

Well Well #11  
RKB to MSL @ 3360.80ft  
RKB to MSL @ 3360.80ft  
Grid  
Minimum Curvature  
Landmark Network DB

Planned Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	V. Sec (ft)	Northing (ft)	Eastings (ft)	Dleg (°/100ft)
4,000.00	0.00	0.00	4,000.00	-639.20	0.00	465,004.10	666,020.00	0.00
4,073.20	0.00	0.00	4,073.20	-712.40	0.00	465,004.10	666,020.00	0.00
Delaware								
4,100.00	0.00	0.00	4,100.00	-739.20	0.00	465,004.10	666,020.00	0.00
4,200.00	0.00	0.00	4,200.00	-839.20	0.00	465,004.10	666,020.00	0.00
4,300.00	3.00	271.30	4,299.95	-939.15	2.62	465,004.16	666,017.38	3.00
4,400.00	6.00	271.30	4,399.63	-1,038.83	10.46	465,004.34	666,009.54	3.00
4,500.00	9.00	271.30	4,498.77	-1,137.97	23.51	465,004.63	665,996.49	3.00
4,600.00	12.00	271.30	4,597.08	-1,236.28	41.74	465,005.05	665,978.28	3.00
4,700.00	15.00	271.30	4,694.31	-1,333.51	65.08	465,005.58	665,954.94	3.00
4,800.00	18.00	271.30	4,790.18	-1,429.38	93.48	465,006.22	665,926.55	3.00
4,900.00	21.00	271.30	4,884.43	-1,523.63	126.85	465,006.98	665,893.18	3.00
5,000.00	24.00	271.30	4,976.81	-1,616.01	165.12	465,007.85	665,854.93	3.00
5,100.00	27.00	271.30	5,067.06	-1,706.26	208.16	465,008.83	665,811.89	3.00
5,200.00	30.00	271.30	5,154.93	-1,794.13	255.87	465,009.91	665,764.19	3.00
5,300.00	33.00	271.30	5,240.18	-1,879.38	308.12	465,011.10	665,711.96	3.00
5,400.00	36.00	271.30	5,322.59	-1,961.79	364.75	465,012.38	665,655.34	3.00
5,500.00	39.00	271.30	5,401.91	-2,041.11	425.62	465,013.77	665,594.49	3.00
5,600.00	42.00	271.30	5,477.94	-2,117.14	490.56	465,015.24	665,529.57	3.00
5,668.92	44.07	271.30	5,528.32	-2,167.52	537.59	465,016.31	665,482.55	3.00
5,700.00	44.07	271.30	5,550.65	-2,189.85	559.21	465,016.80	665,460.94	0.00
5,800.00	44.07	271.30	5,622.50	-2,261.70	628.76	465,018.38	665,391.41	0.00
5,900.00	44.07	271.30	5,694.35	-2,333.55	698.31	465,019.96	665,321.87	0.00
6,000.00	44.07	271.30	5,766.21	-2,405.41	767.86	465,021.54	665,252.34	0.00
6,100.00	44.07	271.30	5,838.06	-2,477.26	837.41	465,023.12	665,182.81	0.00
6,200.00	44.07	271.30	5,909.91	-2,549.11	906.96	465,024.70	665,113.28	0.00
6,300.00	44.07	271.30	5,981.76	-2,620.96	976.51	465,026.28	665,043.74	0.00



PathFinder Energy Services  
Global X&Y Report



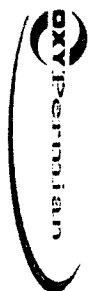
Company: OXY Permian  
Project: Eddy County, NM  
Site: Sand Dune Fed 29 #11  
Well: Well #11  
Wellbore: OH  
Design: Plan #1

Local Co-ordinate Reference:  
TVD Reference:  
MD Reference:  
North Reference:  
Survey Calculation Method:  
Database:

Well Well #11  
RKB to MSL @ 3360.80ft  
RKB to MSL @ 3360.80ft  
Grid  
Minimum Curvature  
Landmark Network DB

Planned Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	V. Sec (ft)	Northing (ft)	Easting (ft)	D Leg (%100ft)
6,400.00	44.07	271.30	6,053.61	-2,692.81	1,046.06	465,027.85	664,974.21	0.00
6,500.00	44.07	271.30	6,125.47	-2,764.67	1,115.61	465,029.43	664,904.68	0.00
6,600.00	44.07	271.30	6,197.32	-2,836.52	1,185.16	465,031.01	664,835.14	0.00
6,700.00	44.07	271.30	6,269.17	-2,908.37	1,254.71	465,032.59	664,765.61	0.00
6,800.00	44.07	271.30	6,341.02	-2,980.22	1,324.26	465,034.17	664,696.08	0.00
6,900.00	44.07	271.30	6,412.87	-3,052.07	1,393.81	465,035.75	664,626.55	0.00
7,000.00	44.07	271.30	6,484.73	-3,123.93	1,463.36	465,037.33	664,557.01	0.00
7,100.00	44.07	271.30	6,556.58	-3,195.78	1,532.92	465,038.91	664,487.48	0.00
7,200.00	44.07	271.30	6,628.43	-3,267.63	1,602.47	465,040.49	664,417.95	0.00
7,300.00	44.07	271.30	6,700.28	-3,339.48	1,672.02	465,042.07	664,348.41	0.00
7,400.00	44.07	271.30	6,772.13	-3,411.33	1,741.57	465,043.65	664,278.88	0.00
7,500.00	44.07	271.30	6,843.98	-3,483.18	1,811.12	465,045.23	664,209.35	0.00
7,600.00	44.07	271.30	6,915.84	-3,555.04	1,880.67	465,046.81	664,139.82	0.00
7,700.00	44.07	271.30	6,987.69	-3,626.89	1,950.22	465,048.39	664,070.28	0.00
7,800.00	44.07	271.30	7,059.54	-3,698.74	2,019.77	465,049.97	664,000.75	0.00
7,900.00	44.07	271.30	7,131.39	-3,770.59	2,089.32	465,051.55	663,931.22	0.00
8,000.00	44.07	271.30	7,203.24	-3,842.44	2,158.87	465,053.13	663,861.68	0.00
8,100.00	44.07	271.30	7,275.10	-3,914.30	2,228.42	465,054.71	663,792.15	0.00
8,200.00	44.07	271.30	7,346.95	-3,986.15	2,297.97	465,056.28	663,722.62	0.00
8,300.00	44.07	271.30	7,418.80	-4,058.00	2,367.52	465,057.86	663,653.09	0.00
8,400.00	44.07	271.30	7,490.65	-4,129.85	2,437.07	465,059.44	663,583.55	0.00
8,500.00	44.07	271.30	7,562.50	-4,201.70	2,506.63	465,061.02	663,514.02	0.00
8,600.00	44.07	271.30	7,634.36	-4,273.56	2,576.18	465,062.60	663,444.49	0.00
8,652.67	44.07	271.30	7,672.20	-4,311.40	2,612.81	465,063.43	663,407.87	0.00
BC A								
8,700.00	44.07	271.30	7,706.21	-4,345.41	2,645.73	465,064.18	663,374.96	0.00
8,800.00	44.07	271.30	7,778.06	-4,417.26	2,715.28	465,065.76	663,305.42	0.00



**PathFinder Energy Services**  
Global X&Y Report



Company: OXY Perminian  
Project: Eddy County, NM  
Site: Sand Dune Fed 29 #11  
Well: Well #11  
Wellbore: OH  
Design: Plan #1

Local Co-ordinate Reference:  
TVD Reference:  
MD Reference:  
North Reference:  
Survey Calculation Method:  
Database:

Well Well #11  
RKB to MSL @ 3360.80ft  
RKB to MSL @ 3360.80ft  
Grid  
Minimum Curvature  
Landmark Network DB

**Planned Survey**

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDS (ft)	V. Sec (ft)	Northing (ft)	Easting (ft)	DLeg (%100ft)
8,900.00	44.07	271.30	7,849.91	-4,489.11	2,784.83	465,067.34	663,235.89	0.00
9,000.00	44.07	271.30	7,921.76	-4,560.96	2,854.38	465,068.92	663,166.36	0.00
9,010.35	44.07	271.30	7,929.20	-4,568.40	2,861.58	465,069.08	663,159.16	0.00
<b>Bone Springs</b>								
9,081.05	44.07	271.30	7,980.00	-4,619.20	2,910.75	465,070.20	663,110.00	0.00
<b>SD Fed 29 #11 BHL</b>								



PathFinder Energy Services  
Global X&Y Report



<b>Company:</b> OXY Permiian		<b>Local Co-ordinate Reference:</b>		<b>Well Well #11</b>	
<b>Project:</b> Eddy County, NM		<b>TVD Reference:</b>		<b>RKB to MSL @ 3360.80ft</b>	
<b>Site:</b> Sand Dune Fed 29 #11		<b>MD Reference:</b>		<b>RKB to MSL @ 3360.80ft</b>	
<b>Well:</b> Well #11		<b>North Reference:</b>		<b>Grid</b>	
<b>Wellbore:</b> OH		<b>Survey Calculation Method:</b>		<b>Minimum Curvature</b>	
<b>Design:</b> Plan #1		<b>Database:</b>		<b>Landmark Network DB</b>	

Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N-S	+E-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
- Shape									
SD Fed 29 #11 BHL	0.00	0.00	7,980.00	66.10	-2,910.00	465,070.20	663,110.00	32° 16' 38.97093 N	03° 48' 20.05433 W
- plan hits target center									
- Point									

Casing Points			
Measured Depth	Vertical Depth	Casing Diameter	Hole Diameter
(ft)	(ft)	(")	(")
4,000.00	4,000.00	8-5/8	12-1/4

Formations					
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction
(ft)	(ft)			(°)	(°)
9,010.35	7,929.20	Bone Springs		0.00	
8,652.67	7,672.20	BC A		0.00	
4,073.20	4,073.20	Delaware		0.00	

Checked By: _____	Approved By: _____	Date: _____
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<b>SENDER: COMPLETE THIS SECTION</b> ■ Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired. ■ Print your name and address on the reverse so that we can return the card to you. ■ Attach this card to the back of the mailpiece, or on the front if space permits.	<b>COMPLETE THIS SECTION ON DELIVERY</b> A. Signature <input checked="" type="checkbox"/> Agent <input type="checkbox"/> Addressee B. Received by (Printed Name) C. Date of Delivery D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No 3. Service Type <input checked="" type="checkbox"/> Certified Mail <input type="checkbox"/> Express Mail <input type="checkbox"/> Registered <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Insured Mail <input type="checkbox"/> C.O.D. 4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes
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1. Article Addressed to:

BLM  
620 E. Greene St.  
Carlsbad NM 88220

2. Article Number (Transfer from service label) 7005 0390 0002 9920 7610

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540

<b>SENDER: COMPLETE THIS SECTION</b> ■ Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired. ■ Print your name and address on the reverse so that we can return the card to you. ■ Attach this card to the back of the mailpiece, or on the front if space permits.	<b>COMPLETE THIS SECTION ON DELIVERY</b> A. Signature <input checked="" type="checkbox"/> Agent <input type="checkbox"/> Addressee B. Received by (Printed Name) C. Date of Delivery D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No 3. Service Type <input checked="" type="checkbox"/> Certified Mail <input type="checkbox"/> Express Mail <input type="checkbox"/> Registered <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Insured Mail <input type="checkbox"/> C.O.D. 4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes
--	--

1. Article Addressed to:

NMOCU  
1301 W. Grand Ave.  
Artesia NM 88210

2. Article Number (Transfer from service label) 7005 0390 0002 9920 7627

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540

<b>SENDER: COMPLETE THIS SECTION</b> ■ Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired. ■ Print your name and address on the reverse so that we can return the card to you. ■ Attach this card to the back of the mailpiece, or on the front if space permits.	<b>COMPLETE THIS SECTION ON DELIVERY</b> A. Signature <input checked="" type="checkbox"/> Agent <input type="checkbox"/> Addressee B. Received by (Printed Name) C. Date of Delivery D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No 3. Service Type <input checked="" type="checkbox"/> Certified Mail <input type="checkbox"/> Express Mail <input type="checkbox"/> Registered <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Insured Mail <input type="checkbox"/> C.O.D. 4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes
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1. Article Addressed to:

NMOCU  
1220 S. St. Francis Dr.  
Santa Fe NM 87505

2. Article Number (Transfer from service label) 7005 0390 0002 9920 7634

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540

<b>SENDER: COMPLETE THIS SECTION</b> ■ Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired. ■ Print your name and address on the reverse so that we can return the card to you. ■ Attach this card to the back of the mailpiece, or on the front if space permits.	<b>COMPLETE THIS SECTION ON DELIVERY</b> A. Signature <input checked="" type="checkbox"/> Agent <input type="checkbox"/> Addressee B. Received by (Printed Name) C. Date of Delivery D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No 3. Service Type <input checked="" type="checkbox"/> Certified Mail <input type="checkbox"/> Express Mail <input type="checkbox"/> Registered <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Insured Mail <input type="checkbox"/> C.O.D. 4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes
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1. Article Addressed to:

Devon Energy Prod Co.  
Attn: Ken Gray  
20 N. Broadway  
Oklahoma City, OK 73102

2. Article Number (Transfer from service label) 7005 0390 0002 9920 7641

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540

<b>SENDER: COMPLETE THIS SECTION</b> ■ Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired. ■ Print your name and address on the reverse so that we can return the card to you. ■ Attach this card to the back of the mailpiece, or on the front if space permits.	<b>COMPLETE THIS SECTION ON DELIVERY</b> A. Signature <input checked="" type="checkbox"/> Agent <input type="checkbox"/> Addressee B. Received by (Printed Name) C. Date of Delivery D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No 3. Service Type <input checked="" type="checkbox"/> Certified Mail <input type="checkbox"/> Express Mail <input type="checkbox"/> Registered <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Insured Mail <input type="checkbox"/> C.O.D. 4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes
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1. Article Addressed to:

Southwest Royalties Inc.  
Attn: Randy Howard  
6 Desta Dr. Ste. 2100  
Midland TX 79705

2. Article Number (Transfer from service label) 7005 0390 0002 9920 7658