

S15MR-200115-C-107A 5085

Revised March 23, 2017

RECEIVED: 1/15/20	REVIEWER:	TYPE: DHC	APP NO: pDM2014264414
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ABOVE THIS TABLE FOR OCD DIVISION USE ONLY

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



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

Applicant: Hilcorp Energy Company **OGRID Number:** 372171
Well Name: San Juan 27-4 Unit 57 **API:** 30-039-20383
Pool: Blanco Mesaverde **Pool Code:** 72319

SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED BELOW

- 1) **TYPE OF APPLICATION:** Check those which apply for [A]
 A. Location – Spacing Unit – Simultaneous Dedication
 NSL NSP (PROJECT AREA) NSP (PRORATION UNIT) SD
- B. Check one only for [I] or [II]
 [I] Commingling – Storage – Measurement
 DHC CTB PLC PC OLS OLM
 [II] Injection – Disposal – Pressure Increase – Enhanced Oil Recovery
 WFX PMX SWD IPI EOR PPR

- 2) **NOTIFICATION REQUIRED TO:** Check those which apply.
 A. Offset operators or lease holders
 B. Royalty, overriding royalty owners, revenue owners
 C. Application requires published notice
 D. Notification and/or concurrent approval by SLO
 E. Notification and/or concurrent approval by BLM
 F. Surface owner
 G. For all of the above, proof of notification or publication is attached, and/or,
 H. No notice required

FOR OCD ONLY	
<input type="checkbox"/>	Notice Complete
<input type="checkbox"/>	Application Content Complete

3) **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.

Lee Murphy
Print or Type Name

Signature

1-14-2020
Date

(713)209-2400
Phone Number

lmurphy@hilcorp.com
e-mail Address

District I
1625 N. French Drive, Hobbs, NM 88240

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-107A
Revised August 1, 2011

District II
811 S. First St., Artesia, NM 88210

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

APPLICATION TYPE
 Single Well
 Establish Pre-Approved Pools
EXISTING WELLBORE
 Yes No

District III
1000 Rio Brazos Road, Aztec, NM 87410

District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

APPLICATION FOR DOWNHOLE COMMINGLING

Hilcorp Energy Company 382 Road 3100, Aztec NM 87410
Operator Address

San Juan 27-4 Unit 57 Unit M – Sec. 28 – T27N – R04W Rio Arriba
Lease Well No. Unit Letter-Section-Township-Range County

OGRID No. 372171 Property Code 319210 API No. 30-039-20383 Lease Type: Federal State Fee

DATA ELEMENT	UPPER ZONE	INTERMEDIATE ZONE	LOWER ZONE
Pool Name	Blanco Mesaverde	BS Mesa Gallup	Basin Dakota
Pool Code	72319	72920	71599
Top and Bottom of Pay Section (Perforated or Open-Hole Interval)	5700' – 6600'	6835' – 8000'	8254' – 8468'
Method of Production (Flowing or Artificial Lift)	New Zone	Plunger	Plunger
Bottomhole Pressure <small>(Note: Pressure data will not be required if the bottom perforation in the lower zone is within 150% of the depth of the top perforation in the upper zone)</small>	1152 psi	1314 psi	1643 psi
Oil Gravity or Gas BTU <small>(Degree API or Gas BTU)</small>	1212 BTU	1178 BTU	1300 BTU
Producing, Shut-In or New Zone	New Zone	Producing	Producing
Date and Oil/Gas/Water Rates of Last Production. <small>(Note: For new zones with no production history, applicant shall be required to attach production estimates and supporting data.)</small>	Date: N/A Rates:	Date: 11/2019 Rates: 7 bo, 460 mcf, 4 bw	Date: 11/2019 Rates: 15 bo, 662 mcf, 5 bw
Fixed Allocation Percentage <small>(Note: If allocation is based upon something other than current or past production, supporting data or explanation will be required.)</small>	Oil Gas Will be supplied upon completion	Oil Gas Will be supplied upon completion	Oil Gas Will be supplied upon completion

ADDITIONAL DATA

Are all working, royalty and overriding royalty interests identical in all commingled zones? Yes No
If not, have all working, royalty and overriding royalty interest owners been notified by certified mail? Yes No

Are all produced fluids from all commingled zones compatible with each other? Yes No

Will commingling decrease the value of production? Yes No

If this well is on, or communitized with, state or federal lands, has either the Commissioner of Public Lands or the United States Bureau of Land Management been notified in writing of this application? Yes No

NMOCD Reference Case No. applicable to this well: R-13681

Attachments:

- C-102 for each zone to be commingled showing its spacing unit and acreage dedication.
- Production curve for each zone for at least one year. (If not available, attach explanation.)
- For zones with no production history, estimated production rates and supporting data.
- Data to support allocation method or formula.
- Notification list of working, royalty and overriding royalty interests for uncommon interest cases.
- Any additional statements, data or documents required to support commingling.

PRE-APPROVED POOLS

If application is to establish Pre-Approved Pools, the following additional information will be required:

- List of other orders approving downhole commingling within the proposed Pre-Approved Pools
- List of all operators within the proposed Pre-Approved Pools
- Proof that all operators within the proposed Pre-Approved Pools were provided notice of this application.
- Bottomhole pressure data.

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

SIGNATURE Michelle Sivadon TITLE Reservoir Engineer DATE 01/14/2020

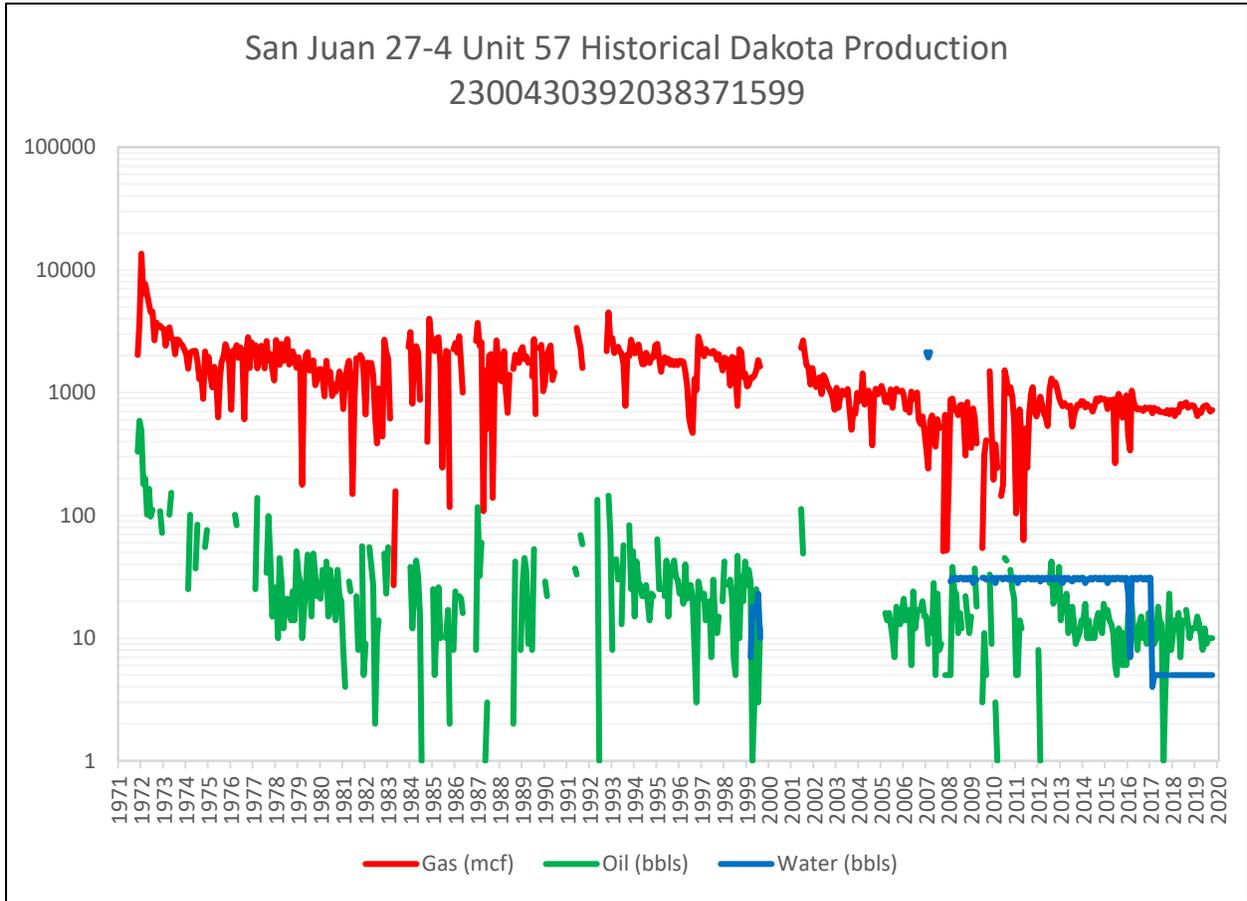
TYPE OR PRINT NAME Michelle Sivadon TELEPHONE NO. (713)209-2400

E-MAIL ADDRESS msivadon@hilcorp.com

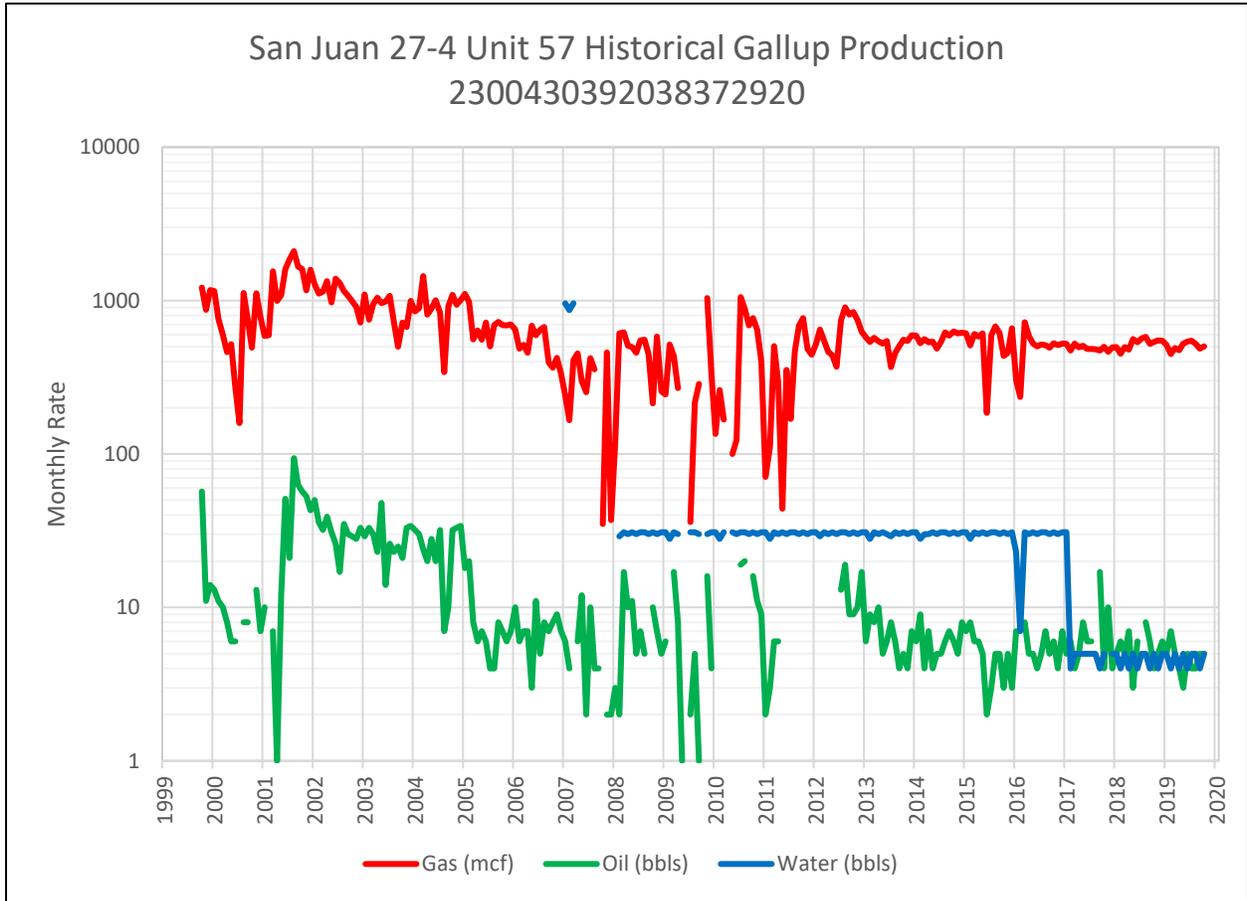
Discussion of Pressures

Based on pressure transient analysis work from other Dakota wells in the basin, direct measurement of static reservoir pressures from producing wells in these tight gas sandstones requires shut-in periods on the order of years, primarily due to low permeability, relatively high total compressibility, and lack of structural or stratigraphic boundaries. Back of the envelope radius of investigation calculations assuming radial flow indicate required shut in periods of 5 to 7 years given the low density of producing wells. As well, we have some multi-week build-ups in the Dakota in other parts of the basin that indicate even longer shut-in times, up to 25 years, to reach boundary-dominated flow. The shut-in wellbore pressure thus is expected to be lower than the far-field, stabilized reservoir pressure, direct measurement of which is practically infeasible. Our observation is that even for areas of high static reservoir pressure, the low permeability of the reservoir rock results in rapid depletion of the near-fracture region, quickly enough that the wells are unable to produce without the aid of a plunger. Given low permeabilities and low wellbore flowing pressures in the Dakota, Gallup, and Mesaverde, loss of reserves due to cross-flow is not an issue during producing or shut-in periods. Given low shut-in bottomhole pressures, commingling the Mesaverde, Gallup and Dakota in this well will not result in shut-in or flowing wellbore pressures in excess of any commingled pool's fracture parting pressure.

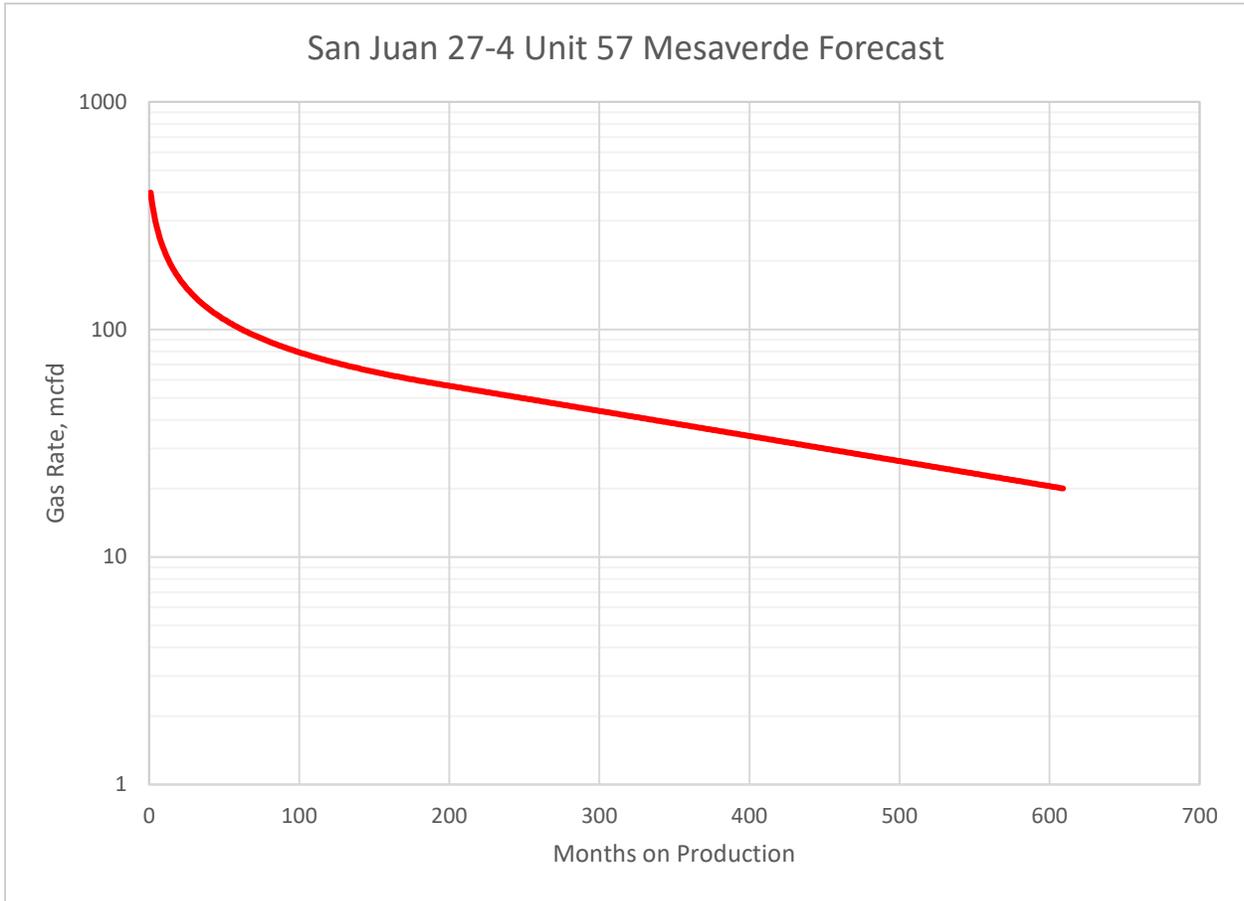
SAN JUAN 27-4 UNIT 57 – HISTORICAL DAKOTA PRODUCTION:



SAN JUAN 27-4 UNIT 57 – HISTORICAL GALLUP PRODUCTION:



SAN JUAN 27-4 UNIT 57 – MESAVERDE PRODUCTION FORECAST



The forecast for Mesaverde production has been generated using a typical well production profile of Mesaverde gas production in the surrounding production trend.

SAN JUAN 27-4 UNIT 57 – PRODUCTION ALLOCATION METHOD

Production for the downhole commingle will be allocated using the subtraction method in agreement with the BLM. The base formations are the Dakota and Gallup, and the added formation to be commingled is the Mesaverde. The subtraction method applies an average monthly production forecast to the base formations using historic production. All production from this well exceeding the forecast will be allocated to the new formation. After 3 years production will stabilize. A production average will be gathered during the 4th year and will be utilized to create a fixed, percentage-based allocation. Oil production will be allocated based on average formation yields from offset wells. All documentation will be submitted to the Aztec NMOCD office.

District I
 1625 N. French Dr., Hobbs, NM 88240
 Phone:(575) 393-6161 Fax:(575) 393-0720

District II
 811 S. First St., Artesia, NM 88210
 Phone:(575) 748-1283 Fax:(575) 748-9720

District III
 1000 Rio Brazos Rd., Aztec, NM 87410
 Phone:(505) 334-6178 Fax:(505) 334-6170

District IV
 1220 S. St Francis Dr., Santa Fe, NM 87505
 Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural
Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

Form C-102
 August 1, 2011
 Permit 274114

WELL LOCATION AND ACREAGE DEDICATION PLAT

1. API Number 30-039-20383	2. Pool Code 72319	3. Pool Name BLANCO-MESAVERDE (PRORATED GAS)
4. Property Code 319210	5. Property Name SAN JUAN 27 4 UNIT	6. Well No. 057
7. OGRID No. 372171	8. Operator Name HILCORP ENERGY COMPANY	9. Elevation 7207

10. Surface Location

UL - Lot M	Section 28	Township 27N	Range 04W	Lot Idn	Feet From 990	N/S Line S	Feet From 850	E/W Line W	County RIO ARRIBA
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11. Bottom Hole Location If Different From Surface

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
12. Dedicated Acres 320.00	13. Joint or Infill			14. Consolidation Code			15. Order No.		

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

	OPERATOR CERTIFICATION		
	<i>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(s) 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.</i>		
	E-Signed By: Tammy Jones Title: Operations/Regulatory Technician - Sr. Date: 11/7/2019		
	SURVEYOR CERTIFICATION		
<i>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.</i>			
Surveyed By: David Kilven Date of Survey: 8/20/1968 Certificate Number: 1760			

District I
 O Box 1980, Hobbs, NM 88241-1980
 District II
 O Drawer DD, Artesia, NM 88211-0719
 District III
 000 Rio Brazos Rd., Aztec, NM 87410
 District IV
 O Box 2088, Santa Fe, NM 87504-2088

State of New Mexico
 Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
 PO Box 2088
 Santa Fe, NM 87504-2088

Form C-102
 Revised February 21, 1994
 Instructions on back
 Submit to Appropriate District Office
 State Lease - 4 Copies
 Fee Lease - 3 Copies

99 JUN 17 PM 4:22

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-039-20383		Pool Code 72920/71599		Pool Name BS Mesa Gallup/Basin Dakota	
Property Code 7452		Property Name San Juan 27-4 Unit			Well Number 57
OGRID No. 14538		Operator Name Burlington Resources Oil & Gas Company			Elevation 7207 GR

10 Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	28	27N	4W		990	South	850	West	RA

11 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

Dedicated Acres Gal = 180 DK/W/320	12 Joint or Infill	13 Consolidation Code	14 Order No.
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

<p>16</p>	<p>Original plat from David O. Vilven 8-20-68</p>	<p>17 OPERATOR CERTIFICATION</p> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief</p> <p><i>Peggy Bradfield</i> Signature Peggy Bradfield Printed Name Regulatory Administrator Title 6-19-99 Date</p>
		<p>18 SURVEYOR CERTIFICATION</p> <p>I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.</p> <p>Date of Survey Signature and Seal of Professional Surveyer: Certificate Number</p>

NEW MEXICO OIL CONSERVATION COMMISSION
WELL LOCATION AND ACREAGE DEDICATION PLAT

All dimensions must be from the center of the well.

EL PASO NATURAL GAS COMPANY

SAN JUAN 27-1 UNIT (SF-080675)

57

N 28 27-N 1-N RIO ARriba

990 SOUTH 850 WEST

7207 DAKOTA EAST DAKOTA 320.00

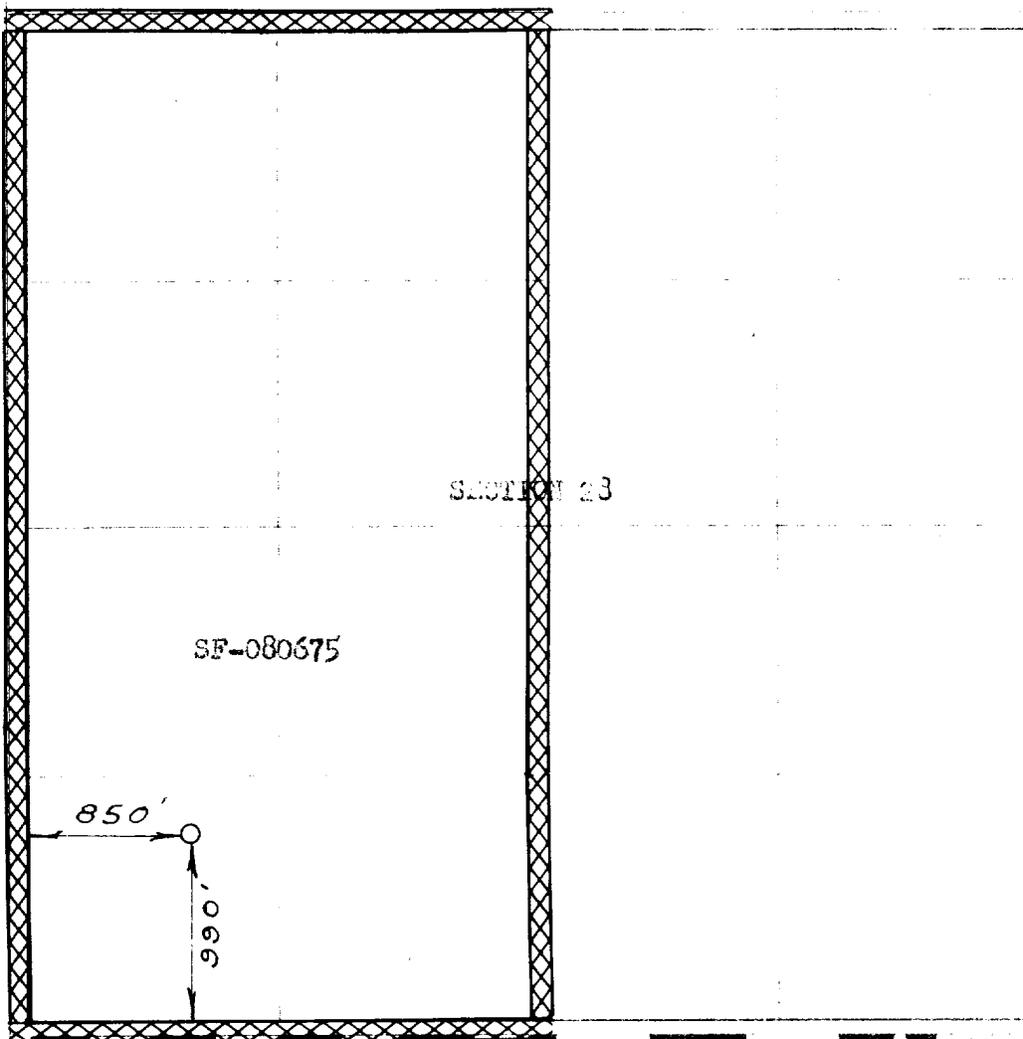
1. Outline the acreage dedicated to the subject well by colored pencil or hardware marks on the plat form.
2. If more than one lease is dedicated to the well, outline each, and identify the well showing the acreage, lease, interest and royalty.
3. If more than one lease of different ownership is dedicated to the well, have the interests consolidated by communitization, unitization, force pooling, etc.

Yes No If answer is "Yes," type of consolidation

Unitization

If answer is "No," list the owners and their descriptions as shown on the plat form on this form if necessary.

No allowable will be assigned to the well and all interests have been consolidated by communitization, forced pooling, or otherwise on unit or non-standard unit. If a unit or non-standard unit has been designated, the name of the unit or non-standard unit shall be stated.



Original Signed F. H. WOOD

Petroleum Engineer

El Paso Natural Gas Company

June 8, 1971

AUGUST 20, 1968

David O. Klien

Form 3160-5
(June 2015)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO. 1004-0137
Expires: January 31, 2018

SUNDRY NOTICES AND REPORTS ON WELLS
Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.

5. Lease Serial No.
NMSF080675
6. If Indian, Allottee or Tribe Name

SUBMIT IN TRIPLICATE - Other instructions on page 2

7. If Unit or CA/Agreement, Name and/or No.
8910010540

1. Type of Well
 Oil Well Gas Well Other

8. Well Name and No.
SAN JUAN 27-4 UNIT 57

2. Name of Operator
HILCORP ENERGY COMPANY
Contact: TAMMY JONES
E-Mail: tajones@hilcorp.com

9. API Well No.
30-039-20383-00-C1

3a. Address
1111 TRAVIS STREET
HOUSTON, TX 77002

3b. Phone No. (include area code)
Ph: 505-324-5185

10. Field and Pool or Exploratory Area
BASIN DAKOTA
BS MESA

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
Sec 28 T27N R4W SWSW 0990FSL 0850FWL
36.539660 N Lat, 107.261490 W Lon

11. County or Parish, State
RIO ARRIBA COUNTY, NM

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Hydraulic Fracturing	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input checked="" type="checkbox"/> Recomplete	<input type="checkbox"/> Other
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.

Hilcorp Energy Company plans to recomplete the subject well in the Mesaverde formation and downhole tri-mingle with the existing Gallup and Dakota. Attached is the MV C102, recomplete procedure, wellbore schematic & gas capture plan. The DHC application will be submitted and approved prior to tri-mingling. A closed loop system will be utilized. Interim reclamation will be performed after surface disturbing activities.

NMOCD

NOV 18 2019

DISTRICT III

HOLD C104 FOR DHC

14. I hereby certify that the foregoing is true and correct.

Electronic Submission #491670 verified by the BLM Well Information System
For HILCORP ENERGY COMPANY, sent to the Farmington
Committed to AFMSS for processing by JOHN HOFFMAN on 11/14/2019 (20JH0068SE)

Name (Printed/Typed) TAMMY JONES

Title OPERATIONS/REGULATORY TECH-SR.

Signature (Electronic Submission)

Date 11/08/2019

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By JOHN HOFFMAN

Title PETROLEUM ENGINEER

Date 11/14/2019

Conditions of approval, if any, are attached. Approval of this notice 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.

Office Farmington

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 page 2)

** BLM REVISED **

AV

4



HILCORP ENERGY COMPANY
SAN JUAN 27-4 UNIT 57
MESA VERDE RECOMPLETION SUNDRY

SAN JUAN 27-4 UNIT 57 - CURRENT WELLBORE SCHEMATIC

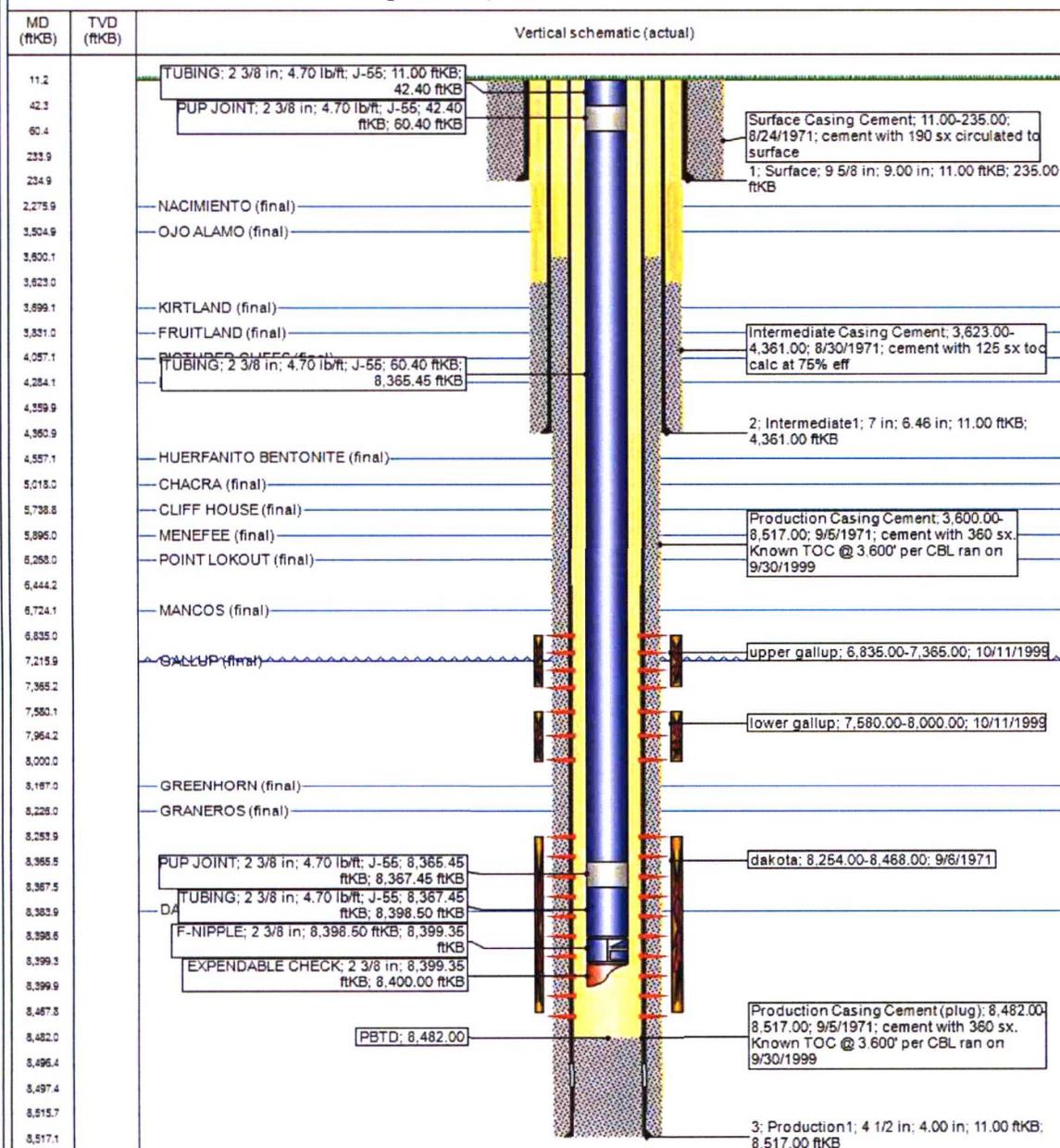


Current Schematic - Version 3

Well Name: **SAN JUAN 27-4 UNIT #57**

API / UWI 3003920383	Surface Leg # Location 028-027N-004W-M	Field Name BS MESA GALLUP (GAS)	Route 1412	State/Province NEW MEXICO	Well Configuration Type
Ground Elevation (ft) 7,207.00	Original KBRT Elevation (ft) 7,218.00	KB-Ground Distance (ft) 11.00	KB-Casing Flange Distance (ft)	KB-Tubing Hanger Distance (ft)	

Original Hole, 10/31/2019 3:58:17 PM





Proposed Schematic

Well Name: **SAN JUAN 27-4 UNIT #57**

API / UWI 3003920383	Surface Legal Location 028-027N-004W-M	Field Name BS MESA GALLUP (GAS)	Route 1412	State/Province NEW MEXICO	Well Configuration Type
Ground Elevation (ft) 7,207.00	Original KB/RT Elevation (ft) 7,218.00	KB-Ground Distance (ft) 11.00	KB-Casing Flange Distance (ft)	KB-Tubing Hanger Distance (ft)	

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