

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM 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.
NMNM30015

6. If Indian, Allottee or Tribe Name

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

SUBMIT IN TRIPLICATE - Other instructions on page 2

1. Type of Well

☐ Oil Well ☐ Gas Well ☒ Other: COAL BED METHANE8. Well Name and No.
CARRACAS 18B 3

2. Name of Operator

SOUTHLAND ROYALTY COMPANY LLC

Contact: CONNIE BLAYLOCK

Email: CBLAYLOCK@MSPARTNERS.COM

9. API Well No.
30-039-30606-00-S1

3a. Address

400 W 7TH STREET
FORT WORTH, TX 76102

3b. Phone No. (include area code)

Ph: 817-334-7882

10. Field and Pool or Exploratory Area
BASIN FRUITLAND COAL

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

Sec 18 T32N R4W SWSW 755FSL 965FWL
36.981541 N Lat, 107.301265 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			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Hydraulic Fracturing	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other Drilling Operations
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ 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.

PLEASE EXPEDITE APPROVAL. We would like to start work in mid-August.

SRC requests approval to perform the following Sidetrack Procedure:

1. Prepare existing well for drilling operations with a Pulling Unit
2. Pull tubing and rods
3. PU Mill and TIH to verify csg is clean
4. Set CBP at approximately 4400ft, above open Liner
5. Roll hole and pressure test casing
6. Set CBP at approximately 4185ft below proposed window area
7. Release Pulling Unit
8. MIRU drilling rig
9. RU BOP and test

HOLD C100 FOR NSL

NMOC

AUG 09 2018

DISTRICT III

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

Electronic Submission #429492 verified by the BLM Well Information System

For SOUTHLAND ROYALTY COMPANY LLC, sent to the Farmington

Committed to AFMSS for processing by JACK SAVAGE on 08/08/2018 (18JWS0171SE)

Name (Printed/Typed) CONNIE BLAYLOCK

Title REGULATORY TECH

Signature (Electronic Submission)

Date 08/01/2018

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By JACK SAVAGE

Title PETROLEUM ENGINEER

Date 08/08/2018

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 ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED **

NMOC

18

Additional data for EC transaction #429492 that would not fit on the form

32. Additional remarks, continued

10. PU whipstock and csg mill assembly and set whipstock for casing exit at 4175ft MD
11. Release whip and mill window f/ 4175-83ft
12. TOOH for curve BHA and drill sidetrack
13. Planned KOP at 4175ft MD / 4000ft TVD (directional pilot well)
14. Drill 6-1/4in from 4175ft MD / 4000ft TVD to 7881ft MD / 4191ft TVD at 89.33deg Inc, 21.26deg azimuth
15. TOOH and run 4-1/2in pre-perforated liner from approximately 4175ft MD to 7881ft MD
16. RD&R Drilling Rlg
17. MIRU Pulling Unit
18. RIH and retrieve whipstock w/ work string and jars
19. Drill out upper CBP at 4185ft
20. LD work string
21. Run production tbg and equipment to test lateral completion
22. Secure well, rig down and move off location

ATTACHED ARE WELLPATH RPT, PLAT(C-102), WBD.

SRC requests to be notified when approved so we may pick up a copy and hand deliver to the OCD for expediting purposes.



Southland Royalty Company

Carracas 18B-3 Rio Arriba County, NM 32N-4W Section 18

TD - 7,590' MD; 4,185' TVD

12 1/4" hole to 240'
Csg: 5 jts - 9 5/8" 32.3# H-40 ST&C
Setting Depth: 229'

Cement
125 sx Class G (146 ft³)
Circ. 7 bbls cmt to surface

8 3/4" hole to 4,611'
Csg: 102 jts - 7" 23# J-55 LT&C
Setting Depth: 4,601'

Cement
Lead: 635 sx Haliburton Light
Tail: 150 sx Class G (1422 ft³)
Circ. 75 bbls cmt to surface

6 1/4" hole to 7,590'
Liner: 68 jts- 4 1/2" 11.6# J-55 LT&C
Setting Depth: 7,590'
TOL: 4,556'
No cement

Perforations:
Pre-Perforated Liner
4602-7545'
23,540 holes @ 8 jspf

Pumping Unit:
Weatherford 160-200-74

Prepared by: CArnold
Date: 09/07/2017

KB = 15 ft
GL = 7,426 ft
API# 30-039-30606

Spud Date: 06/21/2009
First Delivered: 09/10/2009

NMOC

AUG 09 2018

DISTRICT III

01/29/2014

2-3/8" 4.7# J-55 Prod Tbg and Capstring:
BP, 8' PS, MA Jt, 8' PS, SN, 180 Jts 2-3/8" Tbg, 1x8' Pup
Jt, 1x10' Pup
SS capstring Banded to tbg to lower 8' PS
EOT @ 4520', SN @ 4470'

Rods and Pump:
2"x1.5"x16' Brass RWAC pump w/ 1" strainer
5-2' stabilizer subs
2-4' stabilizer subs
3/4" x 7/8" X-Over
21k Shear Tool
4430' of 13/16" Pro-Rod
1-8'x7/8" pony rod
2-4'x7/8" pony rods
22' Polish rod

4.5" Liner Top
4,556' md

TD - 7,590' MD

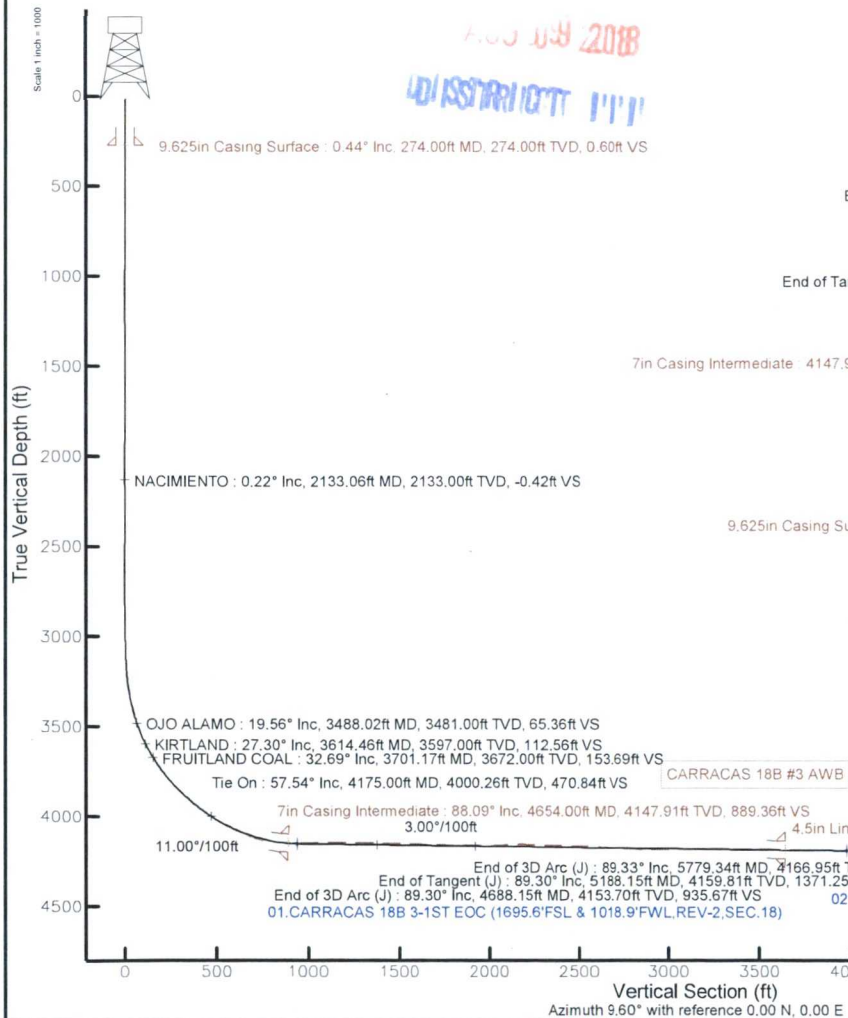
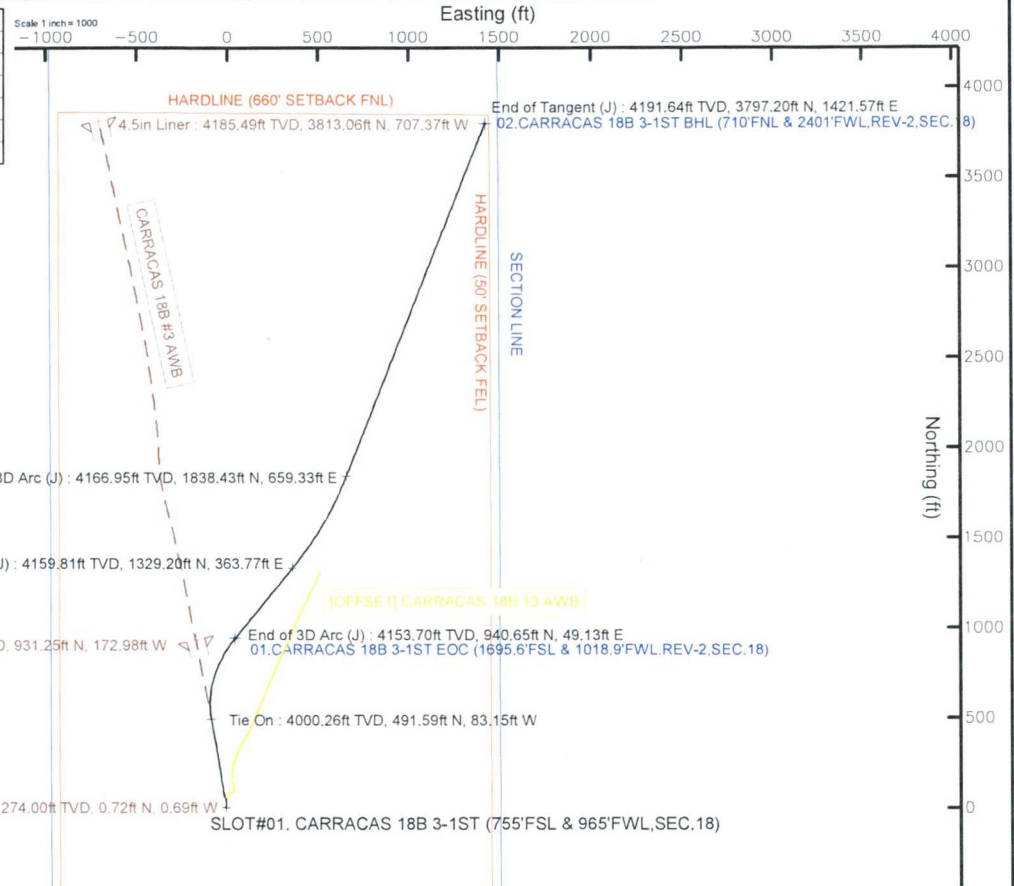
SOUTHLAND ROYALTY COMPANY



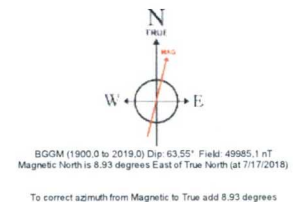
Location: NEW MEXICO
Field: RIO ARriba COUNTY (NAD27/TN)
Facility: SEC.18-T32N-R4W CARRACAS 18B

Slot: SLOT#01, CARRACAS 18B 3-1ST (755'FSL & 965'FWL,SEC.18)
Well: CARRACAS 18B 3-1ST
Wellbore: CARRACAS 18B 3-1ST PWB

Plot reference wellpath is CARRACAS 18B 3-1ST (NAD27,REV-B.0) PWP	
True vertical depths are referenced to Rig on SLOT#01, CARRACAS 18B 3-1ST (755'FSL & 965'FWL,SEC.18) (RKB)	Grid System: NAD27 / TM New Mexico SP, Western Zone (3003), US feet
Measured depths are referenced to Rig on SLOT#01, CARRACAS 18B 3-1ST (755'FSL & 965'FWL,SEC.18) (RKB)	* = Wellpath was transformed from a different geoidic datum
Rig on SLOT#01, CARRACAS 18B 3-1ST (755'FSL & 965'FWL,SEC.18) (RKB) to Mean Sea Level: 7441 feet	North Reference: True north
Mean Sea Level to Ground Level (At Slot: SLOT#01, CARRACAS 18B 3-1ST (755'FSL & 965'FWL,SEC.18)) 0 feet	Scale: True distance
Coordinates are in feet referenced to Slot	Created by: alvayes on 2018-07-25
	Database: WellArchitectDB



Well Profile Data							
Design Comment	MD (ft)	Inc (")	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS ("/100ft)
Tie On	4175.00	57.543	349.340	4000.26	491.59	-83.15	0.00
End of 3D Arc (J)	4688.15	89.300	39.000	4153.70	940.65	49.13	11.00
End of Tangent (J)	5188.15	89.300	39.000	4159.81	1329.20	363.77	0.00
End of 3D Arc (J)	5779.34	89.327	21.263	4166.95	1838.43	659.33	3.00
End of Tangent (J)	7881.34	89.327	21.263	4191.64	3797.20	1421.57	0.00



SOUTHLAND ROYALTY COMPANY



Location: NEW MEXICO Slot: SLOT#01, CARRACAS 18B 3-1ST (755'FSL & 965'FWL, SEC.18)
 Field: RIO ARriba COUNTY (NAD27/TN) Well: CARRACAS 18B 3-1ST
 Facility: SEC.18-T32N-R4W CARRACAS 18B Wellbore: CARRACAS 18B 3-1ST PWB

Well Profile Data

Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	4175.00	57.543	349.340	4000.26	491.59	-83.15	0.00	470.84
End of 3D Arc (J)	4688.15	89.300	39.000	4153.70	940.65	49.13	11.00	935.67
End of Tangent (J)	5188.15	89.300	39.000	4159.81	1329.20	363.77	0.00	1371.25
End of 3D Arc (J)	5779.34	89.327	21.263	4166.95	1838.43	659.33	3.00	1922.64
End of Tangent (J)	7881.34	89.327	21.263	4191.64	3797.20	1421.57	0.00	3981.10

Targets

Name	MD (ft)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
01 CARRACAS 18B 3-1ST EOC (1095.0'FSL & 1018.9'FWL REV-2 SEC.18)	4688.15	4153.70	940.65	49.13	655627.11	2177905.02	36°59'02.647"N	107°18'01.817"W
02 CARRACAS 18B 3-1ST BHL (710'FSL & 2401'FWL REV-2 SEC.18)	7881.34	4191.64	3797.20	1421.57	656983.48	2180769.03	36°59'30.891"N	107°17'44.901"W

Tie-On Position

MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
4175.00	57.543	349.340	4000.26	491.59	-83.15	655497.35	2177455.25	36°58'58.207"N	107°18'03.448"W

Bottom Hole Location

MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
7881.34	89.327	21.263	4191.64	3797.20	1421.57	656983.48	2180769.03	36°59'30.891"N	107°17'44.901"W

Hole and Casing Sections

Name	Start MD (ft)	End MD (ft)	Interval (ft)	Start TVD (ft)	End TVD (ft)	Start Local N (ft)	Start Local E (ft)	End Local N (ft)	End Local E (ft)	Wellbore
12.25in Open Hole	15.00	274.00	259.00	15.00	274.00	0.00	0.00	0.72	-0.69	CARRACAS 18B #3 AWB
9.625in Casing Surface	15.00	274.00	259.00	15.00	274.00	0.00	0.00	0.72	-0.69	CARRACAS 18B #3 AWB
8.75in Open Hole	274.00	4175.00	3901.00	274.00	4000.26	0.72	-0.69	491.59	-83.15	CARRACAS 18B #3 AWB
7in Casing Intermediate	15.00	4175.00	4160.00	15.00	4000.26	0.00	0.00	491.59	-83.15	CARRACAS 18B #3 AWB
6.25in Open Hole	4175.00	7881.34	3706.34	4000.26	N/A	491.59	-83.15	N/A	N/A	CARRACAS 18B 3-1ST PWB

Formation Tops

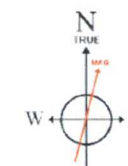
Formation	MD (ft)	TVD (ft)	Dip (°)	Dip Azimuth (°)	Formation Name
	2133.06	2133.00	0.000	0.000	NACIMIENTO
	3488.02	3481.00	0.000	0.000	OJO ALAMO
	3614.46	3597.00	0.000	0.000	KIRTLAND
	3701.17	3672.00	0.000	0.000	FRUITLAND COAL

Plot reference wellpath is CARRACAS 18B 3-1ST (NAD27, REV-B.0) PWP	Grid System: NAD27 / TM New Mexico SP, Western Zone (3003), US feet
True vertical depths are referenced to Rig on SLOT#01, CARRACAS 18B 3-1ST (755'FSL & 965'FWL, SEC.18) (RKB)	* = Wellpath was transformed from a different geodetic datum
Measured depths are referenced to Rig on SLOT#01, CARRACAS 18B 3-1ST (755'FSL & 965'FWL, SEC.18) (RKB)	North Reference: True north
Rig on SLOT#01, CARRACAS 18B 3-1ST (755'FSL & 965'FWL, SEC.18) (RKB) to Mean Sea Level 7441 feet	Scale: True distance
Mean Sea Level to Ground level (At Slot: SLOT#01, CARRACAS 18B 3-1ST (755'FSL & 965'FWL, SEC.18)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: alayes on 2018-07-25
	Database: WellArchitectDB

Location Information

Facility Name			Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SEC.18-T32N-R4W CARRACAS 18B			655583.248	2176964.160	36°58'53.346"N	107°18'02.423"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SLOT#01, CARRACAS 18B 3-1ST (755'FSL & 965'FWL,SEC.18)	0.00	0.00	655583.248	2176964.160	36°58'53.346"N	107°18'02.423"W
Rig on SLOT#01, CARRACAS 18B 3-1ST (755'FSL & 965'FWL,SEC.18) (RKB) to Ground level (At Slot: SLOT#01, CARRACAS 18B 3-1ST (755'FSL & 965'FWL,SEC.18))					7441ft	
Mean Sea Level to Ground level (At Slot: SLOT#01, CARRACAS 18B 3-1ST (755'FSL & 965'FWL,SEC.18))					0ft	
Rig on SLOT#01, CARRACAS 18B 3-1ST (755'FSL & 965'FWL,SEC.18) (RKB) to Mean Sea Level					7441ft	

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 DISTRICT 1111



BGGM (1900.0 to 2019.0) Dip: 63.55° Field: 49985.1 nT
 Magnetic North is 8.93 degrees East of True North (at 7/17/2018)

To correct azimuth from Magnetic to True add 8.93 degrees

Planned Wellpath Report

CARRACAS 18B 3-1ST (NAD27,REV-B.0) PWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	SOUTHLAND ROYALTY COMPANY	Slot	SLOT#01. CARRACAS 18B 3-1ST (755'FSL & 965'FWL,SEC.18)
Area	NEW MEXICO	Well	CARRACAS 18B 3-1ST
Field	RIO ARriba COUNTY (NAD27/TN)	Wellbore	CARRACAS 18B 3-1ST PWB
Facility	SEC.18-T32N-R4W CARRACAS 18B	Sidetrack from	CARRACAS 18B #3 AWP <274'-7582'> TD:7590'MD at 4175.00 MD

REPORT SETUP INFORMATION			
Projection System	NAD27 / TM New Mexico SP, Western Zone (3003), US feet	Software System	WellArchitect® 5.0
North Reference	True	User	Alvayes
Scale	0.999944	Report Generated	7/25/2018 at 4:31:53 PM
Convergence at slot	0.33° East	Database/Source file	WellArchitectDB/CARRACAS_18B_3-1ST__NAD27_REV-B.0__PWP.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	0.00	0.00	655583.25	2176964.16	36°58'53.346"N	107°18'02.423"W
Facility Reference Pt			655583.25	2176964.16	36°58'53.346"N	107°18'02.423"W
Field Reference Pt			152400.30	0.00	30°59'42.846"N	108°56'33.629"W

WELLPATH DATUM			
Calculation method	Minimum curvature	Rig on SLOT#01. CARRACAS 18B 3-1ST (755'FSL & 965'FWL,SEC.18) (RKB) to Facility Vertical Datum	7441.00ft
Horizontal Reference Pt	Slot	Rig on SLOT#01. CARRACAS 18B 3-1ST (755'FSL & 965'FWL,SEC.18) (RKB) to Mean Sea Level	7441.00ft
Vertical Reference Pt	Rig on SLOT#01. CARRACAS 18B 3-1ST (755'FSL & 965'FWL,SEC.18) (RKB)	Rig on SLOT#01. CARRACAS 18B 3-1ST (755'FSL & 965'FWL,SEC.18) (RKB) to Ground Level at Slot (SLOT#01. CARRACAS 18B 3-1ST (755'FSL & 965'FWL,SEC.18))	7441.00ft
MD Reference Pt	Rig on SLOT#01. CARRACAS 18B 3-1ST (755'FSL & 965'FWL,SEC.18) (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	9.60°

Planned Wellpath Report

CARRACAS 18B 3-1ST (NAD27,REV-B.0) PWP

Page 2 of 6



REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHLAND ROYALTY COMPANY	Slot	SLOT#01. CARRACAS 18B 3-1ST (755'FSL & 965'FWL,SEC.18)
Area	NEW MEXICO	Well	CARRACAS 18B 3-1ST
Field	RIO ARRIBA COUNTY (NAD27/TN)	Wellbore	CARRACAS 18B 3-1ST PWB
Facility	SEC.18-T32N-R4W CARRACAS 18B	Sidetrack from	CARRACAS 18B #3 AWP <274'-7582'> TD:7590'MD at 4175.00 MD

WELLPATH DATA (119 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]	Comments
0.00†	0.000	316.390	0.00	0.00	0.00	0.00	655583.25	2176964.16	36°58'53.346"N	107°18'02.423"W	0.00	0.00	0.00	
15.00	0.000	316.390	15.00	0.00	0.00	0.00	655583.25	2176964.16	36°58'53.346"N	107°18'02.423"W	0.00	0.00	0.00	
274.00	0.440	316.390	274.00	0.60	0.72	-0.69	655582.56	2176964.88	36°58'53.353"N	107°18'02.431"W	0.17	0.17	-16.84	
364.00	0.180	297.430	364.00	0.85	1.04	-1.05	655582.19	2176965.19	36°58'53.356"N	107°18'02.436"W	0.31	-0.29	-21.07	
456.00	0.000	238.150	456.00	0.89	1.10	-1.18	655582.06	2176965.26	36°58'53.357"N	107°18'02.438"W	0.20	-0.20	68.01	
548.00	0.260	254.260	548.00	0.80	1.05	-1.38	655581.86	2176965.20	36°58'53.356"N	107°18'02.440"W	0.28	0.28	-114.93	
639.00	0.260	234.880	638.99	0.57	0.87	-1.75	655581.50	2176965.02	36°58'53.355"N	107°18'02.445"W	0.10	0.00	-21.30	
731.00	0.090	224.430	730.99	0.36	0.70	-1.97	655581.28	2176964.85	36°58'53.353"N	107°18'02.447"W	0.19	-0.18	-11.36	
819.00	0.180	162.580	818.99	0.18	0.52	-1.97	655581.27	2176964.67	36°58'53.351"N	107°18'02.447"W	0.18	0.10	-70.28	
913.00	0.260	191.210	912.99	-0.16	0.17	-1.97	655581.28	2176964.32	36°58'53.348"N	107°18'02.447"W	0.14	0.09	30.46	
1004.00	0.260	216.650	1003.99	-0.55	-0.20	-2.14	655581.11	2176963.95	36°58'53.344"N	107°18'02.449"W	0.13	0.00	27.96	
1095.00	0.090	139.740	1094.99	-0.78	-0.42	-2.21	655581.04	2176963.73	36°58'53.342"N	107°18'02.450"W	0.28	-0.19	-84.52	
1186.00	0.090	44.670	1185.99	-0.77	-0.42	-2.12	655581.13	2176963.72	36°58'53.342"N	107°18'02.449"W	0.15	0.00	-104.47	
1276.00	2.020	299.590	1275.97	-0.17	0.41	-3.45	655579.80	2176964.55	36°58'53.350"N	107°18'02.465"W	2.27	2.14	-116.76	
1366.00	0.790	284.260	1365.95	0.42	1.35	-5.43	655577.81	2176965.47	36°58'53.359"N	107°18'02.490"W	1.42	-1.37	-17.03	
1458.00	0.180	144.450	1457.94	0.37	1.38	-5.96	655577.28	2176965.51	36°58'53.360"N	107°18'02.496"W	1.02	-0.66	-151.97	
1550.00	0.260	224.300	1549.94	0.10	1.12	-6.02	655577.22	2176965.24	36°58'53.357"N	107°18'02.497"W	0.31	0.09	86.79	
1642.00	0.090	183.410	1641.94	-0.15	0.90	-6.17	655577.07	2176965.02	36°58'53.355"N	107°18'02.499"W	0.22	-0.18	-44.45	
1732.00	0.000	269.670	1731.94	-0.22	0.82	-6.17	655577.07	2176964.95	36°58'53.354"N	107°18'02.499"W	0.10	-0.10	196.21	
1823.00	0.090	240.530	1822.94	-0.26	0.79	-6.24	655577.01	2176964.91	36°58'53.354"N	107°18'02.500"W	0.10	0.10	-131.29	
1916.00	0.090	179.340	1915.94	-0.38	0.68	-6.30	655576.95	2176964.81	36°58'53.353"N	107°18'02.501"W	0.10	0.00	-65.80	
2009.00	0.090	94.110	2008.94	-0.44	0.60	-6.22	655577.02	2176964.73	36°58'53.352"N	107°18'02.500"W	0.13	0.00	-91.65	
2102.00	0.260	98.140	2101.94	-0.43	0.57	-5.94	655577.30	2176964.69	36°58'53.352"N	107°18'02.496"W	0.18	0.18	4.33	
2133.06†	0.224	88.748	2133.00	-0.42	0.56	-5.81	655577.43	2176964.69	36°58'53.352"N	107°18'02.495"W	0.17	-0.12	-30.24	NACIMIENTO
2195.00	0.180	60.710	2194.94	-0.33	0.61	-5.61	655577.64	2176964.74	36°58'53.352"N	107°18'02.492"W	0.17	-0.07	-45.27	
2288.00	0.090	351.690	2287.94	-0.17	0.75	-5.49	655577.75	2176964.88	36°58'53.353"N	107°18'02.491"W	0.18	-0.10	-74.22	
2380.00	0.000	18.890	2379.94	-0.10	0.82	-5.50	655577.74	2176964.95	36°58'53.354"N	107°18'02.491"W	0.10	-0.10	9.03	
2473.00	0.260	188.330	2472.94	-0.32	0.62	-5.53	655577.71	2176964.74	36°58'53.352"N	107°18'02.491"W	0.28	0.28	-184.59	
2567.00	0.090	135.160	2566.94	-0.57	0.35	-5.51	655577.74	2176964.48	36°58'53.349"N	107°18'02.491"W	0.23	-0.18	-56.56	
2660.00	0.000	42.720	2659.94	-0.61	0.30	-5.46	655577.79	2176964.43	36°58'53.349"N	107°18'02.490"W	0.10	-0.10	-145.33	

Planned Wellpath Report

CARRACAS 18B 3-1ST (NAD27,REV-B.0) PWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHLAND ROYALTY COMPANY	Slot	SLOT#01. CARRACAS 18B 3-1ST (755'FSL & 965'FWL,SEC.18)
Area	NEW MEXICO	Well	CARRACAS 18B 3-1ST
Field	RIO ARRIBA COUNTY (NAD27/TN)	Wellbore	CARRACAS 18B 3-1ST PWB
Facility	SEC.18-T32N-R4W CARRACAS 18B	Sidetrack from	CARRACAS 18B #3 AWP <274'-7582'> TD:7590'MD at 4175.00 MD

WELLPATH DATA (119 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]	Comments
2753.00	0.090	52.470	2752.94	-0.56	0.34	-5.40	655577.85	2176964.47	36°58'53.349"N	107°18'02.490"W	0.10	0.10	56.42	
2847.00	0.350	36.700	2846.94	-0.25	0.62	-5.17	655578.07	2176964.75	36°58'53.352"N	107°18'02.487"W	0.28	0.28	-16.78	
2878.00	0.700	43.730	2877.94	-0.01	0.83	-4.98	655578.26	2176964.96	36°58'53.354"N	107°18'02.484"W	1.15	1.13	22.68	
2909.00	0.970	34.740	2908.93	0.38	1.18	-4.70	655578.54	2176965.32	36°58'53.358"N	107°18'02.481"W	0.97	0.87	-29.00	
2940.00	1.140	26.850	2939.93	0.92	1.68	-4.41	655578.83	2176965.81	36°58'53.363"N	107°18'02.477"W	0.72	0.55	-25.45	
2971.00	1.410	11.700	2970.92	1.59	2.32	-4.20	655579.04	2176966.46	36°58'53.369"N	107°18'02.475"W	1.39	0.87	-48.87	
3001.00	1.580	1.060	3000.91	2.37	3.10	-4.11	655579.12	2176967.24	36°58'53.377"N	107°18'02.474"W	1.08	0.57	-35.47	
3032.00	1.670	356.400	3031.90	3.23	3.98	-4.13	655579.09	2176968.11	36°58'53.385"N	107°18'02.474"W	0.52	0.29	-15.03	
3064.00	1.670	0.800	3063.88	4.15	4.91	-4.16	655579.06	2176969.05	36°58'53.395"N	107°18'02.474"W	0.40	0.00	13.75	
3095.00	1.850	7.080	3094.87	5.09	5.86	-4.09	655579.13	2176969.99	36°58'53.404"N	107°18'02.473"W	0.85	0.58	20.26	
3126.00	2.110	9.300	3125.85	6.16	6.92	-3.94	655579.27	2176971.05	36°58'53.414"N	107°18'02.472"W	0.87	0.84	7.16	
3157.00	2.810	9.780	3156.82	7.49	8.23	-3.71	655579.49	2176972.37	36°58'53.427"N	107°18'02.469"W	2.26	2.26	1.55	
3187.00	3.870	10.930	3186.77	9.24	9.95	-3.40	655579.80	2176974.09	36°58'53.444"N	107°18'02.465"W	3.54	3.53	3.83	
3218.00	5.280	11.160	3217.67	11.71	12.37	-2.92	655580.26	2176976.52	36°58'53.468"N	107°18'02.459"W	4.55	4.55	0.74	
3250.00	6.510	9.010	3249.50	15.00	15.61	-2.35	655580.81	2176979.76	36°58'53.500"N	107°18'02.452"W	3.90	3.84	-6.72	
3281.00	8.180	3.500	3280.25	18.95	19.55	-1.94	655581.19	2176983.70	36°58'53.539"N	107°18'02.447"W	5.84	5.39	-17.77	
3313.00	10.020	357.830	3311.84	23.94	24.60	-1.91	655581.20	2176988.75	36°58'53.589"N	107°18'02.447"W	6.39	5.75	-17.72	
3344.00	11.520	353.010	3342.30	29.55	30.37	-2.39	655580.69	2176994.52	36°58'53.646"N	107°18'02.452"W	5.64	4.84	-15.55	
3375.00	13.190	348.890	3372.58	35.82	36.91	-3.45	655579.59	2177001.05	36°58'53.711"N	107°18'02.465"W	6.09	5.39	-13.29	
3407.00	14.860	347.770	3403.62	43.05	44.51	-5.02	655577.98	2177008.64	36°58'53.786"N	107°18'02.485"W	5.29	5.22	-3.50	
3438.00	16.620	348.140	3433.46	50.86	52.73	-6.77	655576.18	2177016.85	36°58'53.867"N	107°18'02.506"W	5.69	5.68	1.19	
3469.00	18.470	348.440	3463.02	59.57	61.88	-8.67	655574.23	2177025.99	36°58'53.958"N	107°18'02.530"W	5.97	5.97	0.97	
3488.02†	19.564	348.699	3481.00	65.36	67.96	-9.90	655572.97	2177032.06	36°58'54.018"N	107°18'02.545"W	5.77	5.75	1.36	OJO ALAMO
3501.00	20.310	348.860	3493.20	69.49	72.30	-10.76	655572.09	2177036.39	36°58'54.061"N	107°18'02.556"W	5.77	5.75	1.24	
3532.00	22.070	349.580	3522.10	80.00	83.31	-12.85	655569.93	2177047.39	36°58'54.170"N	107°18'02.581"W	5.74	5.68	2.32	
3563.00	24.090	350.020	3550.62	91.43	95.27	-15.00	655567.72	2177059.33	36°58'54.288"N	107°18'02.608"W	6.54	6.52	1.42	
3594.00	25.940	351.610	3578.71	103.84	108.21	-17.09	655565.56	2177072.26	36°58'54.416"N	107°18'02.634"W	6.35	5.97	5.13	
3614.46†	27.301	351.502	3597.00	112.56	117.27	-18.43	655564.16	2177081.32	36°58'54.506"N	107°18'02.650"W	6.66	6.66	-0.53	KIRTLAND
3623.00	27.870	351.460	3604.57	116.32	121.18	-19.02	655563.55	2177085.23	36°58'54.544"N	107°18'02.657"W	6.66	6.66	-0.49	
3654.00	29.990	350.720	3631.70	130.53	136.00	-21.34	655561.14	2177100.03	36°58'54.691"N	107°18'02.686"W	6.94	6.84	-2.39	

Planned Wellpath Report

CARRACAS 18B 3-1ST (NAD27,REV-B.0) PWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	SOUTHLAND ROYALTY COMPANY	Slot	SLOT#01. CARRACAS 18B 3-1ST (755'FSL & 965'FWL,SEC.18)
Area	NEW MEXICO	Well	CARRACAS 18B 3-1ST
Field	RIO ARriba COUNTY (NAD27/TN)	Wellbore	CARRACAS 18B 3-1ST PWB
Facility	SEC.18-T32N-R4W CARRACAS 18B	Sidetrack from	CARRACAS 18B #3 AWP <274'-7582'> TD:7590'MD at 4175.00 MD

WELLPATH DATA (119 stations) † = interpolated/extrapolated station														
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]	Comments
3686.00	31.740	350.320	3659.17	146.05	152.19	-24.05	655558.35	2177116.20	36°58'54.851"N	107°18'02.719"W	5.51	5.47	-1.25	FRUITLAND COAL
3701.17†	32.689	350.692	3672.00	153.69	160.16	-25.38	655556.97	2177124.17	36°58'54.930"N	107°18'02.736"W	6.39	6.25	2.45	
3717.00	33.680	351.060	3685.25	161.90	168.72	-26.76	655555.55	2177132.72	36°58'55.014"N	107°18'02.753"W	6.39	6.26	2.33	
3748.00	35.350	350.960	3710.79	178.54	186.07	-29.50	655552.71	2177150.05	36°58'55.186"N	107°18'02.787"W	5.39	5.39	-0.32	
3779.00	36.930	351.260	3735.83	195.88	204.13	-32.33	655549.78	2177168.10	36°58'55.364"N	107°18'02.821"W	5.13	5.10	0.97	
3810.00	38.690	351.210	3760.32	213.92	222.91	-35.22	655546.78	2177186.86	36°58'55.550"N	107°18'02.857"W	5.68	5.68	-0.16	
3842.00	40.800	351.170	3784.92	233.33	243.13	-38.36	655543.54	2177207.06	36°58'55.750"N	107°18'02.896"W	6.59	6.59	-0.12	
3873.00	42.740	351.420	3808.04	252.93	263.54	-41.48	655540.30	2177227.45	36°58'55.952"N	107°18'02.934"W	6.28	6.26	0.81	
3904.00	44.230	351.090	3830.53	273.18	284.63	-44.72	655536.93	2177248.52	36°58'56.160"N	107°18'02.974"W	4.86	4.81	-1.06	
3935.00	45.990	350.140	3852.41	293.95	306.29	-48.31	655533.23	2177270.16	36°58'56.375"N	107°18'03.018"W	6.08	5.68	-3.06	
3965.00	47.920	349.510	3872.89	314.58	327.87	-52.18	655529.24	2177291.72	36°58'56.588"N	107°18'03.066"W	6.61	6.43	-2.10	
3996.00	49.070	349.420	3893.43	336.37	350.70	-56.43	655524.86	2177314.51	36°58'56.814"N	107°18'03.118"W	3.72	3.71	-0.29	
4027.00	50.470	349.080	3913.45	358.56	373.95	-60.84	655520.32	2177337.74	36°58'57.043"N	107°18'03.173"W	4.59	4.52	-1.10	
4058.00	51.880	349.210	3932.89	381.19	397.66	-65.39	655515.64	2177361.43	36°58'57.278"N	107°18'03.229"W	4.56	4.55	0.42	
4089.00	53.380	349.050	3951.70	404.27	421.86	-70.04	655510.86	2177385.60	36°58'57.517"N	107°18'03.286"W	4.86	4.84	-0.52	
4120.00	55.130	349.500	3969.81	427.86	446.58	-74.72	655506.04	2177410.29	36°58'57.762"N	107°18'03.344"W	5.77	5.65	1.45	
4152.00	56.630	349.340	3987.76	452.73	472.62	-79.58	655501.03	2177436.30	36°58'58.019"N	107°18'03.404"W	4.71	4.69	-0.50	
4175.00	57.543	349.340	4000.26	470.84	491.59	-83.15	655497.35	2177455.25	36°58'58.207"N	107°18'03.448"W	0.00	3.97	0.00	Tie On
4275.00†	62.504	0.686	4050.33	554.49	577.67	-90.45	655489.57	2177541.28	36°58'59.058"N	107°18'03.538"W	11.00	4.96	11.35	
4375.00†	68.300	10.977	4092.03	645.03	667.90	-81.04	655498.47	2177631.56	36°58'59.950"N	107°18'03.422"W	11.00	5.80	10.29	
4475.00†	74.680	20.435	4123.82	739.13	758.98	-55.28	655523.73	2177722.77	36°59'00.850"N	107°18'03.104"W	11.00	6.38	9.46	
4575.00†	81.432	29.317	4144.55	833.32	847.55	-14.11	655564.40	2177811.57	36°59'01.726"N	107°18'02.597"W	11.00	6.75	8.88	
4675.00†	88.381	37.884	4153.44	924.16	930.36	40.96	655619.00	2177894.68	36°59'02.545"N	107°18'01.918"W	11.00	6.95	8.57	
4688.15	89.300	39.000	4153.70†	935.67	940.65	49.13	655627.11	2177905.02	36°59'02.647"N	107°18'01.817"W	11.00	6.99	8.49	End of 3D Arc (J)
4775.00†	89.300	39.000	4154.76	1011.34	1008.15	103.78	655681.39	2177972.81	36°59'03.314"N	107°18'01.144"W	0.00	0.00	0.00	
4875.00†	89.300	39.000	4155.99	1098.45	1085.85	166.71	655743.88	2178050.87	36°59'04.083"N	107°18'00.368"W	0.00	0.00	0.00	
4975.00†	89.300	39.000	4157.21	1185.57	1163.56	229.64	655806.36	2178128.92	36°59'04.851"N	107°17'59.593"W	0.00	0.00	0.00	
5075.00†	89.300	39.000	4158.43	1272.68	1241.27	292.57	655868.85	2178206.98	36°59'05.619"N	107°17'58.817"W	0.00	0.00	0.00	
5175.00†	89.300	39.000	4159.65	1359.80	1318.98	355.49	655931.34	2178285.03	36°59'06.388"N	107°17'58.042"W	0.00	0.00	0.00	
5188.15	89.300	39.000	4159.81	1371.25	1329.20	363.77	655939.56	2178295.29	36°59'06.489"N	107°17'57.940"W	0.00	0.00	0.00	End of Tangent (J)

Planned Wellpath Report

CARRACAS 18B 3-1ST (NAD27,REV-B.0) PWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHLAND ROYALTY COMPANY	Slot	SLOT#01. CARRACAS 18B 3-1ST (755'FSL & 965'FWL,SEC.18)
Area	NEW MEXICO	Well	CARRACAS 18B 3-1ST
Field	RIO ARriba COUNTY (NAD27/TN)	Wellbore	CARRACAS 18B 3-1ST PWB
Facility	SEC.18-T32N-R4W CARRACAS 18B	Sidetrack from	CARRACAS 18B #3 AWP <274'-7582'> TD:7590'MD at 4175.00 MD

WELLPATH DATA (119 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]	Comments
5275.00†	89.300	36.394	4160.87	1447.85	1397.91	416.87	655992.27	2178364.30	36°59'07.168"N	107°17'57.285"W	3.00	0.00	-3.00	
5375.00†	89.301	33.394	4162.09	1538.25	1479.91	474.06	656049.00	2178446.62	36°59'07.979"N	107°17'56.580"W	3.00	0.00	-3.00	
5475.00†	89.305	30.394	4163.31	1630.76	1564.80	526.89	656101.35	2178531.79	36°59'08.818"N	107°17'55.929"W	3.00	0.00	-3.00	
5575.00†	89.310	27.394	4164.52	1725.12	1652.34	575.20	656149.16	2178619.59	36°59'09.684"N	107°17'55.334"W	3.00	0.01	-3.00	
5675.00†	89.317	24.393	4165.72	1821.09	1742.28	618.86	656192.32	2178709.77	36°59'10.573"N	107°17'54.796"W	3.00	0.01	-3.00	
5775.00†	89.327	21.393	4166.90	1918.39	1834.39	657.75	656230.70	2178802.09	36°59'11.484"N	107°17'54.316"W	3.00	0.01	-3.00	
5779.34	89.327	21.263	4166.95	1922.64	1838.43	659.33	656232.25	2178806.14	36°59'11.524"N	107°17'54.297"W	3.00	0.01	-3.00	End of 3D Arc (J)
5875.00†	89.327	21.263	4168.07	2016.32	1927.57	694.02	656266.44	2178895.47	36°59'12.405"N	107°17'53.869"W	0.00	0.00	0.00	
5975.00†	89.327	21.263	4169.25	2114.25	2020.76	730.28	656302.18	2178988.85	36°59'13.326"N	107°17'53.422"W	0.00	0.00	0.00	
6075.00†	89.327	21.263	4170.42	2212.18	2113.94	766.55	656337.92	2179082.24	36°59'14.248"N	107°17'52.975"W	0.00	0.00	0.00	
6175.00†	89.327	21.263	4171.60	2310.10	2207.13	802.81	656373.65	2179175.62	36°59'15.169"N	107°17'52.528"W	0.00	0.00	0.00	
6275.00†	89.327	21.263	4172.77	2408.03	2300.32	839.07	656409.39	2179269.00	36°59'16.091"N	107°17'52.081"W	0.00	0.00	0.00	
6375.00†	89.327	21.263	4173.95	2505.96	2393.50	875.33	656445.13	2179362.38	36°59'17.012"N	107°17'51.634"W	0.00	0.00	0.00	
6475.00†	89.327	21.263	4175.12	2603.89	2486.69	911.60	656480.87	2179455.76	36°59'17.933"N	107°17'51.187"W	0.00	0.00	0.00	
6575.00†	89.327	21.263	4176.30	2701.82	2579.87	947.86	656516.61	2179549.15	36°59'18.855"N	107°17'50.740"W	0.00	0.00	0.00	
6675.00†	89.327	21.263	4177.47	2799.75	2673.06	984.12	656552.35	2179642.53	36°59'19.776"N	107°17'50.293"W	0.00	0.00	0.00	
6775.00†	89.327	21.263	4178.65	2897.68	2766.25	1020.38	656588.09	2179735.91	36°59'20.697"N	107°17'49.846"W	0.00	0.00	0.00	
6875.00†	89.327	21.263	4179.82	2995.60	2859.43	1056.65	656623.83	2179829.29	36°59'21.619"N	107°17'49.399"W	0.00	0.00	0.00	
6975.00†	89.327	21.263	4180.99	3093.53	2952.62	1092.91	656659.56	2179922.67	36°59'22.540"N	107°17'48.952"W	0.00	0.00	0.00	
7075.00†	89.327	21.263	4182.17	3191.46	3045.81	1129.17	656695.30	2180016.06	36°59'23.462"N	107°17'48.505"W	0.00	0.00	0.00	
7175.00†	89.327	21.263	4183.34	3289.39	3138.99	1165.43	656731.04	2180109.44	36°59'24.383"N	107°17'48.058"W	0.00	0.00	0.00	
7275.00†	89.327	21.263	4184.52	3387.32	3232.18	1201.70	656766.78	2180202.82	36°59'25.304"N	107°17'47.611"W	0.00	0.00	0.00	
7375.00†	89.327	21.263	4185.69	3485.25	3325.36	1237.96	656802.52	2180296.20	36°59'26.226"N	107°17'47.164"W	0.00	0.00	0.00	
7475.00†	89.327	21.263	4186.87	3583.18	3418.55	1274.22	656838.26	2180389.59	36°59'27.147"N	107°17'46.717"W	0.00	0.00	0.00	
7575.00†	89.327	21.263	4188.04	3681.11	3511.74	1310.48	656874.00	2180482.97	36°59'28.068"N	107°17'46.270"W	0.00	0.00	0.00	
7675.00†	89.327	21.263	4189.22	3779.03	3604.92	1346.74	656909.73	2180576.35	36°59'28.990"N	107°17'45.823"W	0.00	0.00	0.00	
7775.00†	89.327	21.263	4190.39	3876.96	3698.11	1383.01	656945.47	2180669.73	36°59'29.911"N	107°17'45.376"W	0.00	0.00	0.00	
7875.00†	89.327	21.263	4191.57	3974.89	3791.29	1419.27	656981.21	2180763.11	36°59'30.833"N	107°17'44.929"W	0.00	0.00	0.00	
7881.34	89.327	21.263	4191.64 ²	3981.10	3797.20	1421.57	656983.48	2180769.03	36°59'30.891"N	107°17'44.901"W	0.00	0.00	0.00	End of Tangent (J)

HOLE & CASING SECTIONS - Ref Wellbore: CARRACAS 18B 3-1ST PWB Ref Wellpath: CARRACAS 18B 3-1ST (NAD27,REV-B.0) PWP									
String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
12.25in Open Hole	15.00	274.00	259.00	15.00	274.00	0.00	0.00	0.72	-0.69
9.625in Casing Surface	15.00	274.00	259.00	15.00	274.00	0.00	0.00	0.72	-0.69
8.75in Open Hole	274.00	4175.00	3901.00	274.00	4000.26	0.72	-0.69	491.59	-83.15
7in Casing Intermediate	15.00	4175.00	4160.00	15.00	4000.26	0.00	0.00	491.59	-83.15
6.25in Open Hole	4175.00	7881.34	3706.34	4000.26	N/A	491.59	-83.15	N/A	N/A

TARGETS									
Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
1) 01.CARRACAS 18B 3-1ST EOC (1695.6'FSL & 1018.9'FWL,REV-2,SEC.18)	4688.15	4153.70	940.65	49.13	655627.11	2177905.02	36°59'02.647"N	107°18'01.817"W	point
2) 02.CARRACAS 18B 3-1ST BHL (710'FNL & 2401'FWL,REV-2,SEC.18)	7881.34	4191.64	3797.20	1421.57	656983.48	2180769.03	36°59'30.891"N	107°17'44.901"W	point

SURVEY PROGRAM - Ref Wellbore: CARRACAS 18B 3-1ST PWB Ref Wellpath: CARRACAS 18B 3-1ST (NAD27,REV-B.0) PWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
15.00	4175.00	ISCWSA MWD, Rev. 4 (Standard)		CARRACAS 18B #3 AWB
4175.00	7881.34	BHI NaviTrak (Standard)		CARRACAS 18B 3-1ST PWB

Planned Wellpath Report

CARRACAS 18B 3-1ST (NAD27,REV-B.0) PWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	SOUTHLAND ROYALTY COMPANY	Slot	SLOT#01. CARRACAS 18B 3-1ST (755'FSL & 965'FWL,SEC.18)
Area	NEW MEXICO	Well	CARRACAS 18B 3-1ST
Field	RIO ARriba COUNTY (NAD27/TN)	Wellbore	CARRACAS 18B 3-1ST PWB
Facility	SEC.18-T32N-R4W CARRACAS 18B	Sidetrack from	CARRACAS 18B #3 AWP <274'-7582'> TD:7590'MD at 4175.00 MD

WELLPATH COMMENTS					
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment	
2133.06	0.224	88.748	2133.00	NACIMIENTO	
3488.02	19.564	348.699	3481.00	OJO ALAMO	
3614.46	27.301	351.502	3597.00	KIRTLAND	
3701.17	32.689	350.692	3672.00	FRUITLAND COAL	

DESIGN COMMENTS					
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment	
4175.00	57.543	349.340	4000.26	Tie On	
4688.15	89.300	39.000	4153.70	End of 3D Arc (J)	
5188.15	89.300	39.000	4159.81	End of Tangent (J)	
5779.34	89.327	21.263	4166.95	End of 3D Arc (J)	
7881.34	89.327	21.263	4191.64	End of Tangent (J)	

FORMATION DATA					
MD [ft]	TVD [ft]	Dip [°]	Dip Azimuth [°]	Formation name	
2133.06	2133.00	0.000	0.000	NACIMIENTO	
3488.02	3481.00	0.000	0.000	OJO ALAMO	
3614.46	3597.00	0.000	0.000	KIRTLAND	
3701.17	3672.00	0.000	0.000	FRUITLAND COAL	

CARRACAS_18B_3-1ST__NAD27_REV-B.0__PWP.las

~VERSION INFORMATION

VERS. 2.0 : CWLS LOG ASCII STANDARD-VERSION 2.0

WRAP. NO : ASCII DATA SECTION CONTAINS ONE ROW PER WELLPATH STATION

~WELL INFORMATION

#MNEM	.UNITS	DATA	:DESCRIPTION
#----	.-----	----	:-----
STRT	.ft	0.00	:START MD
STOP	.ft	7881.34	:STOP MD
STEP	.ft	0.0	:STEP (non-uniform increment)
NULL	.	-999.99	:NULL
COMP	.	SOUTHLAND ROYALTY COMPANY	:OPERATOR
WELL	.	CARRACAS 18B 3-1ST	:WELL
FLD	.	RIO ARriba COUNTY (NAD27/TN)	:FIELD
LOC	.	NEW MEXICO	:AREA (aka: Location)
CNTY	.	N/A	:COUNTY
STAT	.	N/A	:STATE
CTRY	.	N/A	:COUNTRY
SRVC	.	Baker Hughes	:CONTRACTOR
DATE	.	07/17/2018	:LOG REV DATE
API	.		:API NUMBER

~OTHER INFORMATION

#Software: WellArchitect(R) Version 5.0

#MNEM	.UNITS	DATA	:DESCRIPTION
#----	.-----	----	:-----
WPTYPE	.	PLANNED WELLPATH	:WELLPATH TYPE
FACILITY	.	SEC.18-T32N-R4W CARRACAS 18B	:FACILITY
SLOT	.	SLOT#01. CARRACAS 18B 3-1ST (755'FSL & 965'FWL,SEC.18)	:SLOT
WELLBORE	.	CARRACAS 18B 3-1ST PWB	:WELLBORE
WELLPATH	.	CARRACAS 18B 3-1ST (NAD27,REV-B.0) PWP	:WELLPATH
MDREFPT	.	Rig on SLOT#01. CARRACAS 18B 3-1ST (755'FSL & 965'FWL,SEC.18) (RKB)	:MD REFERENCE POINT
TVDREFPT	.	Rig on SLOT#01. CARRACAS 18B 3-1ST (755'FSL & 965'FWL,SEC.18) (RKB)	:TVD REFERENCE POINT
LCLREFPT	.	Slot	:LOCAL COORDINATE REFERENCE PT

CARRACAS_18B_3-1ST__NAD27_REV-B.0__PWP.las

VSAZIMUTH.deg :VERTICAL SECTION AZIMUTH
 VSORIGN .ft :VERTICAL SECTION ORIGIN NORTH
 VSORIGE .ft :VERTICAL SECTION ORIGIN EAST

~CURVE (WELLPATH) INFORMATION

#MNEM	.UNITS	:DESCRIPTION
#----	.-----	:-----
DEPT	.ft	:MEASURED DEPTH
INC	.deg	:INCLINATION
AZI	.deg	:AZIMUTH
TVD	.ft	:TRUE VERTICAL DEPTH
LOCALN	.ft	:LOCAL NORTH
LOCALE	.ft	:LOCAL EAST
GRIDE	.US ft	:GRID EAST
GRIDN	.US ft	:GRID NORTH
LAT	.deg	:LATITUDE
LONG	.deg	:LONGITUDE

~ASCII DATA

0.00	0.00	316.39	0.00	0.00	0.00	655583.25	2176964.16	36.9814850	-107.3006731
15.00	0.00	316.39	15.00	0.00	0.00	655583.25	2176964.16	36.9814850	-107.3006731
274.00	0.44	316.39	274.00	0.72	-0.69	655582.56	2176964.88	36.9814870	-107.3006754
364.00	0.18	297.43	364.00	1.04	-1.05	655582.19	2176965.19	36.9814878	-107.3006766
456.00	0.00	238.15	456.00	1.10	-1.18	655582.06	2176965.26	36.9814880	-107.3006771
548.00	0.26	254.26	548.00	1.05	-1.38	655581.86	2176965.20	36.9814879	-107.3006778
639.00	0.26	234.88	638.99	0.87	-1.75	655581.50	2176965.02	36.9814874	-107.3006790
731.00	0.09	224.43	730.99	0.70	-1.97	655581.28	2176964.85	36.9814869	-107.3006798
819.00	0.18	162.58	818.99	0.52	-1.97	655581.27	2176964.67	36.9814864	-107.3006798
913.00	0.26	191.21	912.99	0.17	-1.97	655581.28	2176964.32	36.9814855	-107.3006798
1004.00	0.26	216.65	1003.99	-0.20	-2.14	655581.11	2176963.95	36.9814844	-107.3006804
1095.00	0.09	139.74	1094.99	-0.42	-2.21	655581.04	2176963.73	36.9814838	-107.3006806
1186.00	0.09	44.67	1185.99	-0.42	-2.12	655581.13	2176963.72	36.9814838	-107.3006803
1276.00	2.02	299.59	1275.97	0.41	-3.45	655579.80	2176964.55	36.9814861	-107.3006849
1366.00	0.79	284.26	1365.95	1.35	-5.43	655577.81	2176965.47	36.9814887	-107.3006916

CARRACAS_18B_3-1ST_NAD27_REV-B.0_PWP.las

1458.00	0.18	144.45	1457.94	1.38	-5.96	655577.28	2176965.51	36.9814888	-107.3006934
1550.00	0.26	224.30	1549.94	1.12	-6.02	655577.22	2176965.24	36.9814881	-107.3006937
1642.00	0.09	183.41	1641.94	0.90	-6.17	655577.07	2176965.02	36.9814875	-107.3006942
1732.00	0.00	269.67	1731.94	0.82	-6.17	655577.07	2176964.95	36.9814873	-107.3006942
1823.00	0.09	240.53	1822.94	0.79	-6.24	655577.01	2176964.91	36.9814872	-107.3006944
1916.00	0.09	179.34	1915.94	0.68	-6.30	655576.95	2176964.81	36.9814869	-107.3006946
2009.00	0.09	94.11	2008.94	0.60	-6.22	655577.02	2176964.73	36.9814867	-107.3006944
2102.00	0.26	98.14	2101.94	0.57	-5.94	655577.30	2176964.69	36.9814866	-107.3006934
2195.00	0.18	60.71	2194.94	0.61	-5.61	655577.64	2176964.74	36.9814867	-107.3006922
2288.00	0.09	351.69	2287.94	0.75	-5.49	655577.75	2176964.88	36.9814871	-107.3006918
2380.00	0.00	18.89	2379.94	0.82	-5.50	655577.74	2176964.95	36.9814873	-107.3006919
2473.00	0.26	188.33	2472.94	0.62	-5.53	655577.71	2176964.74	36.9814867	-107.3006920
2567.00	0.09	135.16	2566.94	0.35	-5.51	655577.74	2176964.48	36.9814860	-107.3006919
2660.00	0.00	42.72	2659.94	0.30	-5.46	655577.79	2176964.43	36.9814858	-107.3006917
2753.00	0.09	52.47	2752.94	0.34	-5.40	655577.85	2176964.47	36.9814859	-107.3006915
2847.00	0.35	36.70	2846.94	0.62	-5.17	655578.07	2176964.75	36.9814867	-107.3006908
2878.00	0.70	43.73	2877.94	0.83	-4.98	655578.26	2176964.96	36.9814873	-107.3006901
2909.00	0.97	34.74	2908.93	1.18	-4.70	655578.54	2176965.32	36.9814883	-107.3006892
2940.00	1.14	26.85	2939.93	1.68	-4.41	655578.83	2176965.81	36.9814896	-107.3006882
2971.00	1.41	11.70	2970.92	2.32	-4.20	655579.04	2176966.46	36.9814914	-107.3006874
3001.00	1.58	1.06	3000.91	3.10	-4.11	655579.12	2176967.24	36.9814935	-107.3006871
3032.00	1.67	356.40	3031.90	3.98	-4.13	655579.09	2176968.11	36.9814959	-107.3006872
3064.00	1.67	0.80	3063.88	4.91	-4.16	655579.06	2176969.05	36.9814985	-107.3006873
3095.00	1.85	7.08	3094.87	5.86	-4.09	655579.13	2176969.99	36.9815011	-107.3006871
3126.00	2.11	9.30	3125.85	6.92	-3.94	655579.27	2176971.05	36.9815040	-107.3006865
3157.00	2.81	9.78	3156.82	8.23	-3.71	655579.49	2176972.37	36.9815076	-107.3006858
3187.00	3.87	10.93	3186.77	9.95	-3.40	655579.80	2176974.09	36.9815123	-107.3006847
3218.00	5.28	11.16	3217.67	12.37	-2.92	655580.26	2176976.52	36.9815190	-107.3006831
3250.00	6.51	9.01	3249.50	15.61	-2.35	655580.81	2176979.76	36.9815279	-107.3006811
3281.00	8.18	3.50	3280.25	19.55	-1.94	655581.19	2176983.70	36.9815387	-107.3006797
3313.00	10.02	357.83	3311.84	24.60	-1.91	655581.20	2176988.75	36.9815526	-107.3006796
3344.00	11.52	353.01	3342.30	30.37	-2.39	655580.69	2176994.52	36.9815684	-107.3006812
3375.00	13.19	348.89	3372.58	36.91	-3.45	655579.59	2177001.05	36.9815864	-107.3006849
3407.00	14.86	347.77	3403.62	44.51	-5.02	655577.98	2177008.64	36.9816072	-107.3006902

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3438.00	16.62	348.14	3433.46	52.73	-6.77	655576.18	2177016.85	36.9816298	-107.3006962
3469.00	18.47	348.44	3463.02	61.88	-8.67	655574.23	2177025.99	36.9816550	-107.3007027
3501.00	20.31	348.86	3493.20	72.30	-10.76	655572.09	2177036.39	36.9816836	-107.3007099
3532.00	22.07	349.58	3522.10	83.31	-12.85	655569.93	2177047.39	36.9817138	-107.3007170
3563.00	24.09	350.02	3550.62	95.27	-15.00	655567.72	2177059.33	36.9817467	-107.3007244
3594.00	25.94	351.61	3578.71	108.21	-17.09	655565.56	2177072.26	36.9817822	-107.3007316
3623.00	27.87	351.46	3604.57	121.18	-19.02	655563.55	2177085.23	36.9818178	-107.3007382
3654.00	29.99	350.72	3631.70	136.00	-21.34	655561.14	2177100.03	36.9818585	-107.3007461
3686.00	31.74	350.32	3659.17	152.19	-24.05	655558.35	2177116.20	36.9819030	-107.3007554
3717.00	33.68	351.06	3685.25	168.72	-26.76	655555.55	2177132.72	36.9819484	-107.3007647
3748.00	35.35	350.96	3710.79	186.07	-29.50	655552.71	2177150.05	36.9819961	-107.3007741
3779.00	36.93	351.26	3735.83	204.13	-32.33	655549.78	2177168.10	36.9820457	-107.3007837
3810.00	38.69	351.21	3760.32	222.91	-35.22	655546.78	2177186.86	36.9820972	-107.3007936
3842.00	40.80	351.17	3784.92	243.13	-38.36	655543.54	2177207.06	36.9821528	-107.3008044
3873.00	42.74	351.42	3808.04	263.54	-41.48	655540.30	2177227.45	36.9822088	-107.3008151
3904.00	44.23	351.09	3830.53	284.63	-44.72	655536.93	2177248.52	36.9822667	-107.3008262
3935.00	45.99	350.14	3852.41	306.29	-48.31	655533.23	2177270.16	36.9823263	-107.3008384
3965.00	47.92	349.51	3872.89	327.87	-52.18	655529.24	2177291.72	36.9823855	-107.3008517
3996.00	49.07	349.42	3893.43	350.70	-56.43	655524.86	2177314.51	36.9824482	-107.3008662
4027.00	50.47	349.08	3913.45	373.95	-60.84	655520.32	2177337.74	36.9825121	-107.3008813
4058.00	51.88	349.21	3932.89	397.66	-65.39	655515.64	2177361.43	36.9825772	-107.3008969
4089.00	53.38	349.05	3951.70	421.86	-70.04	655510.86	2177385.60	36.9826437	-107.3009128
4120.00	55.13	349.50	3969.81	446.58	-74.72	655506.04	2177410.29	36.9827116	-107.3009288
4152.00	56.63	349.34	3987.76	472.62	-79.58	655501.03	2177436.30	36.9827831	-107.3009455
4175.00	57.54	349.34	4000.26	491.59	-83.15	655497.35	2177455.25	36.9828352	-107.3009577
4275.00	62.50	0.69	4050.33	577.67	-90.45	655489.57	2177541.28	36.9830716	-107.3009827
4375.00	68.30	10.98	4092.03	667.90	-81.04	655498.47	2177631.56	36.9833194	-107.3009505
4475.00	74.68	20.43	4123.82	758.98	-55.28	655523.73	2177722.77	36.9835696	-107.3008623
4575.00	81.43	29.32	4144.55	847.55	-14.11	655564.40	2177811.57	36.9838128	-107.3007214
4675.00	88.38	37.88	4153.44	930.36	40.96	655619.00	2177894.68	36.9840403	-107.3005328
4688.15	89.30	39.00	4153.70	940.65	49.13	655627.11	2177905.02	36.9840686	-107.3005049
4775.00	89.30	39.00	4154.76	1008.15	103.78	655681.39	2177972.81	36.9842539	-107.3003177
4875.00	89.30	39.00	4155.99	1085.85	166.71	655743.88	2178050.87	36.9844674	-107.3001023
4975.00	89.30	39.00	4157.21	1163.56	229.64	655806.36	2178128.92	36.9846808	-107.2998869

CARRACAS_18B_3-1ST_NAD27_REV-B.0_PWP.las

5075.00	89.30	39.00	4158.43	1241.27	292.57	655868.85	2178206.98	36.9848942	-107.2996714
5175.00	89.30	39.00	4159.65	1318.98	355.49	655931.34	2178285.03	36.9851077	-107.2994560
5188.15	89.30	39.00	4159.81	1329.20	363.77	655939.56	2178295.29	36.9851357	-107.2994277
5275.00	89.30	36.39	4160.87	1397.91	416.87	655992.27	2178364.30	36.9853244	-107.2992459
5375.00	89.30	33.39	4162.09	1479.91	474.06	656049.00	2178446.62	36.9855497	-107.2990501
5475.00	89.31	30.39	4163.31	1564.80	526.89	656101.35	2178531.79	36.9857828	-107.2988692
5575.00	89.31	27.39	4164.52	1652.34	575.20	656149.16	2178619.59	36.9860232	-107.2987038
5675.00	89.32	24.39	4165.72	1742.28	618.86	656192.32	2178709.77	36.9862703	-107.2985543
5775.00	89.33	21.39	4166.90	1834.39	657.75	656230.70	2178802.09	36.9865233	-107.2984212
5779.34	89.33	21.26	4166.95	1838.43	659.33	656232.25	2178806.14	36.9865344	-107.2984158
5875.00	89.33	21.26	4168.07	1927.57	694.02	656266.44	2178895.47	36.9867792	-107.2982970
5975.00	89.33	21.26	4169.25	2020.76	730.28	656302.18	2178988.85	36.9870351	-107.2981729
6075.00	89.33	21.26	4170.42	2113.94	766.55	656337.92	2179082.24	36.9872911	-107.2980487
6175.00	89.33	21.26	4171.60	2207.13	802.81	656373.65	2179175.62	36.9875470	-107.2979245
6275.00	89.33	21.26	4172.77	2300.32	839.07	656409.39	2179269.00	36.9878029	-107.2978004
6375.00	89.33	21.26	4173.95	2393.50	875.33	656445.13	2179362.38	36.9880589	-107.2976762
6475.00	89.33	21.26	4175.12	2486.69	911.60	656480.87	2179455.76	36.9883148	-107.2975521
6575.00	89.33	21.26	4176.30	2579.87	947.86	656516.61	2179549.15	36.9885708	-107.2974279
6675.00	89.33	21.26	4177.47	2673.06	984.12	656552.35	2179642.53	36.9888267	-107.2973037
6775.00	89.33	21.26	4178.65	2766.25	1020.38	656588.09	2179735.91	36.9890826	-107.2971796
6875.00	89.33	21.26	4179.82	2859.43	1056.65	656623.83	2179829.29	36.9893386	-107.2970554
6975.00	89.33	21.26	4180.99	2952.62	1092.91	656659.56	2179922.67	36.9895945	-107.2969312
7075.00	89.33	21.26	4182.17	3045.81	1129.17	656695.30	2180016.06	36.9898505	-107.2968071
7175.00	89.33	21.26	4183.34	3138.99	1165.43	656731.04	2180109.44	36.9901064	-107.2966829
7275.00	89.33	21.26	4184.52	3232.18	1201.70	656766.78	2180202.82	36.9903623	-107.2965587
7375.00	89.33	21.26	4185.69	3325.36	1237.96	656802.52	2180296.20	36.9906183	-107.2964346
7475.00	89.33	21.26	4186.87	3418.55	1274.22	656838.26	2180389.59	36.9908742	-107.2963104
7575.00	89.33	21.26	4188.04	3511.74	1310.48	656874.00	2180482.97	36.9911301	-107.2961862
7675.00	89.33	21.26	4189.22	3604.92	1346.74	656909.73	2180576.35	36.9913861	-107.2960621
7775.00	89.33	21.26	4190.39	3698.11	1383.01	656945.47	2180669.73	36.9916420	-107.2959379
7875.00	89.33	21.26	4191.57	3791.29	1419.27	656981.21	2180763.11	36.9918979	-107.2958137
7881.34	89.33	21.26	4191.64	3797.20	1421.57	656983.48	2180769.03	36.9919142	-107.2958058