GRISWOLD EXHIBIT 11

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-101
August 1, 2011

Permit 289058

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

1. Operator Name and Address		2. OGRID Number
SPC RESOURCES, LLC P.O. Box 1020 Artesia, NM 88211		372262
		3. API Number 30-015-47689
4. Property Code 329799	5. Property Name CAVEMAN 7 12 WCD	6. Well No. 003H

7. Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
E	8	22S	27E	E	2331	N	490	W	Eddy

8. Proposed Bottom Hole Location

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
L	12	22S	26E	L	1980	S	100	W	Eddy

9. Pool Information

PURPLE SAGE;WOLFCAMP (GAS)	98220

Additional Well Information

11. Work Type	12. Well Type	13. Cable/Rotary	14. Lease Type	15. Ground Level Elevation
New Well	GAS		Private	3096
16. Multiple	**17. Proposed Depth**	**18. Formation**	**19. Contractor**	**20. Spud Date**
N	20047	Wolfcamp		1/4/2021
Depth to Ground water		Distance from nearest fresh water well		Distance to nearest surface water

☒ **We will be using a closed-loop system in lieu of lined pits**

21. Proposed Casing and Cement Program

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surf	17.5	13.375	54.5	425	430	0
Int1	12.25	10.75	40.5	2800	500	0
Prod	8.5	5.5	20	20037	2550	9715
Prod	9.875	5.5	20	9715	2150	0

Casing/Cement Program: Additional Comments

SPC plans to drill 9-7/8" open hole to our landing point at 9715' MD in case we need to run a 7-5/8" contingency intermediate casing string. We will then drill the lateral with 8.5" hole and run a 5-1/2" 20# HCP-110 production casing from TD to surface. We will cement production string with 4700 sxs of cement.

22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Annular	3000	2000	Shaffer
Pipe	5000	3000	Shaffer
Blind	5000	3000	Shaffer

23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief.
I further certify I have complied with 19.15.14.9 (A) NMAC ☒ and/or 19.15.14.9 (B) NMAC ☒, if applicable.

Signature:

Printed Name:	Electronically filed by Lelan J Anders	Approved By:	Kurt Simmons
Title:	Vice President of Operations	Title:	Petroleum Specialist - A
Email Address:	landers@santopetroleum.com	Approved Date:	11/17/2020 — Expiration Date: 11/17/2022
Date:	11/16/2020 — Phone: 713-600-7502	Conditions of Approval Attached	

OIL CONSERVATION DIVISION

DISTRICT I
1625 N. French Dr., Hobbs, NM 88240
Phone (575) 393-6161 Fax: (575) 393-0720
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DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

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

Form C-102
Revised August 4, 2011

Submit one copy to appropriate District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
	98220	PURPLE SAGE WOLFCAMP GAS POOL

Property Code	Property Name	Well Number
	CAVEMAN 7-12 WCD	3H
OGRID No.	**Operator Name**	**Elevation**
	SPC RESOURCES, LLC	3096

Surface Location

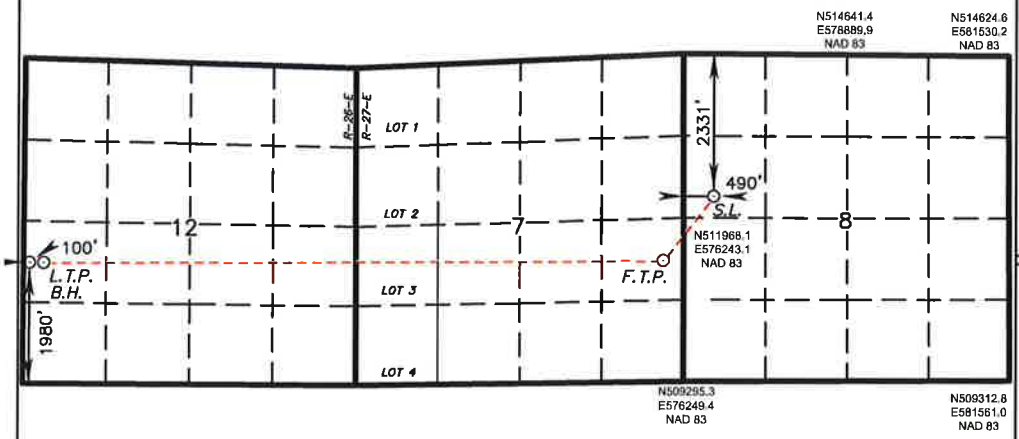
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	SOUTH/South line	Feet from the	East/West line	County
E	8	22 S	27 E		2331	NORTH	490	WEST	EDDY

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	SOUTH/South line	Feet from the	East/West line	County
L	12	22 S	26 E		1980	SOUTH	100	WEST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	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



BOTTOM HOLE LOCATION
Lat – N 32.405415
Long – W 104.254769
NMSPCE– N 511230.3
E 565583.8
(NAD-83)

LAST TAKE POINT
1980 FSL & 330 FWL
Lat – N 32.405414
Long – W 104.254022
NMSPCE– N 511229.5
E 565814.1
(NAD-83)

FIRST TAKE POINT
1980 FSL & 330 FEL
Lat – N 32.405503
Long – W 104.221294
NMSPCE– N 511270.9
E 575914.7
(NAD-83)

SURFACE LOCATION
Lat – N 32.408394
Long – W 104.218641
NMSPCE– N 512324.1
E 576732.2
(NAD-83)

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.

11/5/2020
Signature Date

Lelan J Anders
Printed Name

LAnders@SantoPetroleum.com
Email Address

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 supervison, and that the same is true and correct to the best of my belief.

JULY 31, 2019
Date Surveyed

Signature & Seal of Professional Surveyor

NEW MEXICO 7977 REGISTERED PROFESSIONAL LAND SURVEYOR

Certificate Number 7977

BASIN SURVEYS

0' 1500' 3000' 4500' 6000'
SCALE: 1" = 3000'
WO Num.: 34729

BEFORE THE OIL CONSERVATION DIVISION
Santa Fe, New Mexico
Exhibit No. 2B
Submitted by: **SPC Resources, LLC**
Hearing Date: September 19, 2019
Case No. 20762

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Santa Fe, NM 87505

GAS CAPTURE PLAN

Date: 11/17/2020

☒ Original

☐ Amended - Reason for Amendment:

Operator & OGRID No.: [372262] SPC RESOURCES, LLC

This Gas Capture Plan outlines actions to be taken by the Operator to reduce well/production facility flaring/venting for new completion (new drill, recomplete to new zone, re-frac) activity.

Note: Form C-129 must be submitted and approved prior to exceeding 60 days allowed by Rule (Subsection A of 19.15.18.12 NMAC).

Well(s)/Production Facility – Name of facility

The well(s) that will be located at the production facility are shown in the table below.

Well Name	API	Well Location (ULSTR)	Footages	Expected MCF/D	Flared or Vented	Comments
CAVEMAN 7 12 WCD #003H	30-015-47689	E-8-22S-27E	2331N 0490W	10000	None	Only plan to flare when there is an interrupt in service. We will be setting compression at the tie in point for gas sales.

Gathering System and Pipeline Notification

Well(s) will be connected to a production facility after flowback operations are complete, if gas transporter system is in place. The gas produced from production facility is dedicated to ENTERPRISE FIELD SERVICES L.L.C. and will be connected to ENTERPRISE FIELD SERVICES L.L.C. High Pressure gathering system located in Eddy County, New Mexico. It will require 7300' of pipeline to connect the facility to High Pressure gathering system. SPC RESOURCES, LLC provides (periodically) to ENTERPRISE FIELD SERVICES L.L.C. a drilling, completion and estimated first production date for wells that are scheduled to be drilled in the foreseeable future. In addition, SPC RESOURCES, LLC and ENTERPRISE FIELD SERVICES L.L.C. have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at ENTERPRISE FIELD SERVICES L.L.C. Processing Plant located in Sec. 31, Twn. 23S, Rng. 28E, Eddy County, New Mexico. The actual flow of the gas will be based on compression operating parameters and gathering system pressures.

Flowback Strategy

After the fracture treatment/completion operations, well(s) will be produced to temporary production tanks and gas will be flared or vented. During flowback, the fluids and sand content will be monitored. When the produced fluids contain minimal sand, the wells will be turned to production facilities. Gas sales should start as soon as the wells start flowing through the production facilities, unless there are operational issues on ENTERPRISE FIELD SERVICES L.L.C. system at that time. Based on current information, it is SPC RESOURCES, LLC's belief the system can take this gas upon completion of the well(s).

Safety requirements during cleanout operations from the use of underbalanced air cleanout systems may necessitate that sand and non-pipeline quality gas be vented and/or flared rather than sold on a temporary basis.

Alternatives to Reduce Flaring

Below are alternatives considered from a conceptual standpoint to reduce the amount of gas flared.

- Power Generation – On lease
  - Only a portion of gas is consumed operating the generator, remainder of gas will be flared
- Compressed Natural Gas – On lease
  - Gas flared would be minimal, but might be uneconomical to operate when gas volume declines
- NGL Removal – On lease
  - Plants are expensive, residue gas is still flared, and uneconomical to operate when gas volume declines

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

Form APD Comments

Permit 289058

PERMIT COMMENTS

Operator Name and Address:	API Number:
SPC RESOURCES, LLC [372262] P.O. Box 1020 Artesia, NM 88211	30-015-47689
	Well: CAVEMAN 7 12 WCD #003H

Created By	Comment	Comment Date

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Santa Fe, NM 87505

Form APD Conditions

Permit 289058

PERMIT CONDITIONS OF APPROVAL

Operator Name and Address:	API Number:
SPC RESOURCES, LLC [372262] P.O. Box 1020 Artesia, NM 88211	30-015-47689
	Well: CAVEMAN 7 12 WCD #003H

OCD Reviewer	Condition
ksimmons	Will require a directional survey with the C-104
ksimmons	Cement is required to circulate on both surface and intermediate1 strings of casing
kpickford	Will require a administrative order for non-standard location prior to placing the well on production.
kpickford	Will require administrative order for non-standard spacing unit
kpickford	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string
kpickford	Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system
kpickford	Surface casing must be set 25' below top of Rustler Anhydrite in order to seal off protectable water
kpickford	The Operator is to notify NMOCD by sundry (Form C-103) within ten (10) days of the well being spud
kpickford	The Operator is to notify NMOCD by sundry (Form C-103) within ten (10) days of the well being spud 2)- Drilling Sundries Form C-103 (Casing and Cement test are to be submitted within 10 days 3)- Completion Reports & Logs are to be submitted within 45 days

Santo Petroleum

Eddy County, NM (NAD 83 - NME)
Caveman 7-12
WCD 3H

Wellbore #1

Plan: PERMIT-v2

Standard Planning Report

04 November, 2020

PRELIMINARY

Company: Santo Petroleum
Project: Eddy County, NM (NAD 83 - NME)
Site: Caveman 7-12
Well: WCD 3H
Wellbore: Wellbore #1
Design: PERMIT-v2

SANTO PETROLEUM

WELLBENDERS DIRECTIONAL SERVICES LLC

WELL DETAILS: WCD 3H

Rig Name: Est RKB = 25' @ 3121.00usft
3096.00

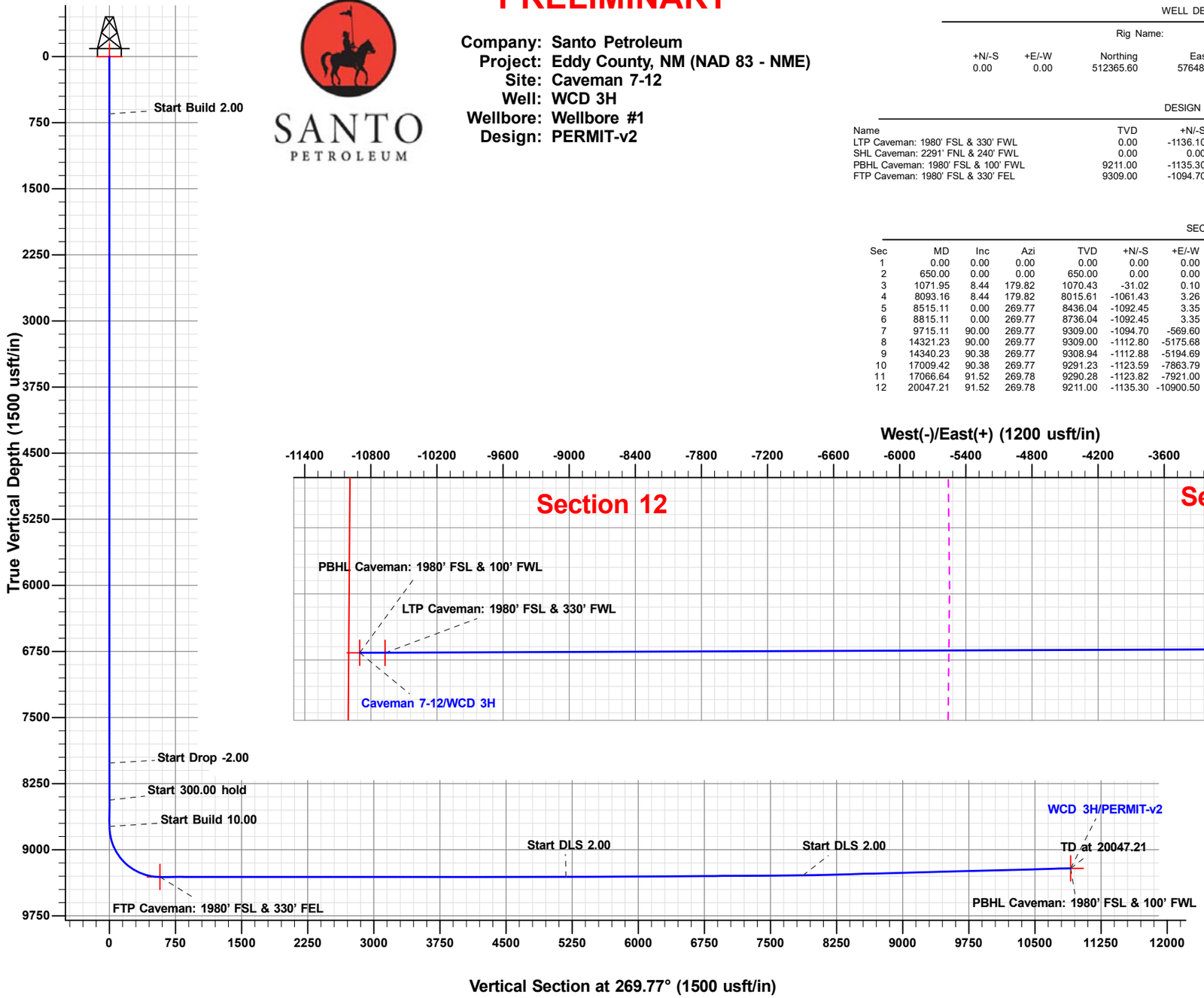
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	512365.60	576484.30	32.408509	-104.219444

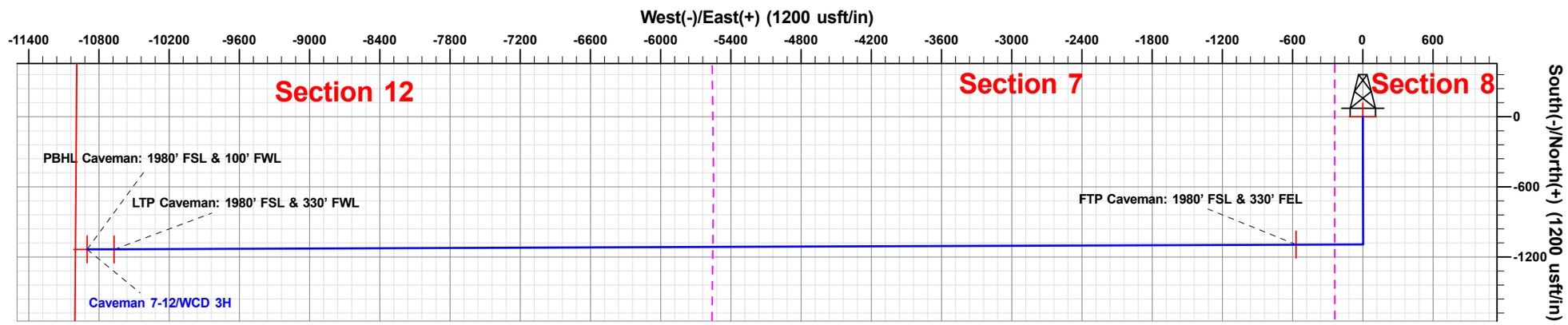
DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
LTP Caveman: 1980' FSL & 330' FWL	0.00	-1136.10	-10670.20	511229.50	565814.10	32.405413	-104.254023
SHL Caveman: 2291' FNL & 240' FWL	0.00	0.00	0.00	512365.60	576484.30	32.408509	-104.219444
PBHL Caveman: 1980' FSL & 100' FWL	9211.00	-1135.30	-10900.50	511230.30	565583.80	32.405415	-104.254769
FTP Caveman: 1980' FSL & 330' FEL	9309.00	-1094.70	-569.60	511270.90	575914.70	32.405502	-104.221294

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	
2	650.00	0.00	0.00	650.00	0.00	0.00	0.00	0.000	0.00	
3	1071.95	8.44	179.82	1070.43	-31.02	0.10	2.00	179.824	0.03	
4	8093.16	8.44	179.82	8015.61	-1061.43	3.26	0.00	0.000	1.00	
5	8515.11	0.00	269.77	8436.04	-1092.45	3.35	2.00	180.000	1.03	
6	8815.11	0.00	269.77	8736.04	-1092.45	3.35	0.00	0.000	1.03	
7	9715.11	90.00	269.77	9309.00	-1094.70	-569.60	10.00	0.000	573.99	FTP Caveman: 1980' FSL & 330' FEL
8	14321.23	90.00	269.77	9309.00	-1112.80	-5175.68	0.00	0.000	5180.11	
9	14340.23	90.38	269.77	9308.94	-1112.88	-5194.69	2.00	-0.728	5199.11	
10	17009.42	90.38	269.77	9291.23	-1123.59	-7863.79	0.00	0.000	7868.24	
11	17066.64	91.52	269.78	9290.28	-1123.82	-7921.00	2.00	0.459	7925.45	
12	20047.21	91.52	269.78	9211.00	-1135.30	-10900.50	0.00	0.000	10904.97	PBHL Caveman: 1980' FSL & 100' FWL





PROJECT DETAILS: Eddy County, NM (NAD 83 - NME)

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Eastern Zone
System Datum: Mean Sea Level

Plan: PERMIT-v2 (WCD 3H/Wellbore #1)

Created By: Matthew May Date: 18:12, November 04 2020

Received by OCD: 11/17/2020 7:57:40 AM

SANTO PETROLEUM

Planning Report

WELLBENDERS DIRECTIONAL SERVICES

Database:	WBDS_SQL_2	**Local Co-ordinate Reference:**	Well WCD 3H
Company:	Santo Petroleum	**TVD Reference:**	Est RKB = 25' @ 3121.00usft
Project:	Eddy County, NM (NAD 83 - NME)	**MD Reference:**	Est RKB = 25' @ 3121.00usft
Site:	Caveman 7-12	**North Reference:**	Grid
Well:	WCD 3H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	PERMIT-v2		

Project Eddy County, NM (NAD 83 - NME)

Map System:	US State Plane 1983	**System Datum:**	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site Caveman 7-12

Site Position:		**Northing:**	512,385.60 usft	**Latitude:**	32.408564
From:	Map	**Easting:**	576,482.00 usft	**Longitude:**	-104.219452
Position Uncertainty:	0.00 usft	**Slot Radius:**	13.200 in	**Grid Convergence:**	0.061 °

Well WCD 3H

Well Position	**+N/-S**	-20.00 usft	**Northing:**	512,365.60 usft	**Latitude:**	32.408509
	+E/-W	2.30 usft	**Easting:**	576,484.30 usft	**Longitude:**	-104.219445
Position Uncertainty		0.00 usft	**Wellhead Elevation:**		**Ground Level:**	3,096.00 usft

Wellbore Wellbore #1

Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF2015	11/03/20	6.903	60.086	47,633.48329003

Design PERMIT-v2

Audit Notes:

Version:		**Phase:**	PLAN	**Tie On Depth:**	0.00

Vertical Section:	**Depth From (TVD) (usft)**	**+N/-S (usft)**	**+E/-W (usft)**	**Direction (°)**
	0.00	0.00	0.00	269.77

Plan Survey Tool Program **Date** 11/04/20

	Depth From (usft)	**Depth To (usft)**	**Survey (Wellbore)**	**Tool Name**	**Remarks**
1	0.00	20,047.21	PERMIT-v2 (Wellbore #1)	MWD+IGRF OWSG MWD + IGRF or WM	

SANTO PETROLEUM

Planning Report

WELLBENDERS DIRECTIONAL SERVICES

Database:	WBDS_SQL_2	**Local Co-ordinate Reference:**	Well WCD 3H
Company:	Santo Petroleum	**TVD Reference:**	Est RKB = 25' @ 3121.00usft
Project:	Eddy County, NM (NAD 83 - NME)	**MD Reference:**	Est RKB = 25' @ 3121.00usft
Site:	Caveman 7-12	**North Reference:**	Grid
Well:	WCD 3H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	PERMIT-v2		

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	
650.00	0.00	0.00	650.00	0.00	0.00	0.00	0.00	0.00	0.000	
1,071.95	8.44	179.82	1,070.43	-31.02	0.10	2.00	2.00	0.00	179.824	
8,093.16	8.44	179.82	8,015.61	-1,061.43	3.26	0.00	0.00	0.00	0.000	
8,515.11	0.00	269.77	8,436.04	-1,092.45	3.35	2.00	-2.00	0.00	180.000	
8,815.11	0.00	269.77	8,736.04	-1,092.45	3.35	0.00	0.00	0.00	0.000	
9,715.11	90.00	269.77	9,309.00	-1,094.70	-569.60	10.00	10.00	0.00	0.000	FTP Caveman: 198
14,321.23	90.00	269.77	9,309.00	-1,112.80	-5,175.68	0.00	0.00	0.00	0.000	
14,340.23	90.38	269.77	9,308.94	-1,112.88	-5,194.69	2.00	2.00	-0.03	-0.728	
17,009.42	90.38	269.77	9,291.23	-1,123.59	-7,863.79	0.00	0.00	0.00	0.000	
17,066.64	91.52	269.78	9,290.28	-1,123.82	-7,921.00	2.00	2.00	0.02	0.459	
20,047.21	91.52	269.78	9,211.00	-1,135.30	-10,900.50	0.00	0.00	0.00	0.000	PBHL Caveman: 19

SANTO PETROLEUM

Planning Report

WELLBENDERS DIRECTIONAL SERVICES

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Company:	Santo Petroleum	**TVD Reference:**	Est RKB = 25' @ 3121.00usft
Project:	Eddy County, NM (NAD 83 - NME)	**MD Reference:**	Est RKB = 25' @ 3121.00usft
Site:	Caveman 7-12	**North Reference:**	Grid
Well:	WCD 3H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	PERMIT-v2		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
650.00	0.00	0.00	650.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	1.00	179.82	700.00	-0.44	0.00	0.00	2.00	2.00	0.00
800.00	3.00	179.82	799.93	-3.93	0.01	0.00	2.00	2.00	0.00
900.00	5.00	179.82	899.68	-10.90	0.03	0.01	2.00	2.00	0.00
1,000.00	7.00	179.82	999.13	-21.35	0.07	0.02	2.00	2.00	0.00
1,071.95	8.44	179.82	1,070.43	-31.02	0.10	0.03	2.00	2.00	0.00
1,100.00	8.44	179.82	1,098.17	-35.13	0.11	0.03	0.00	0.00	0.00
1,200.00	8.44	179.82	1,197.09	-49.81	0.15	0.05	0.00	0.00	0.00
1,300.00	8.44	179.82	1,296.01	-64.49	0.20	0.06	0.00	0.00	0.00
1,400.00	8.44	179.82	1,394.92	-79.16	0.24	0.07	0.00	0.00	0.00
1,500.00	8.44	179.82	1,493.84	-93.84	0.29	0.09	0.00	0.00	0.00
1,600.00	8.44	179.82	1,592.76	-108.51	0.33	0.10	0.00	0.00	0.00
1,700.00	8.44	179.82	1,691.68	-123.19	0.38	0.12	0.00	0.00	0.00
1,800.00	8.44	179.82	1,790.59	-137.86	0.42	0.13	0.00	0.00	0.00
1,900.00	8.44	179.82	1,889.51	-152.54	0.47	0.14	0.00	0.00	0.00
2,000.00	8.44	179.82	1,988.43	-167.22	0.51	0.16	0.00	0.00	0.00
2,100.00	8.44	179.82	2,087.34	-181.89	0.56	0.17	0.00	0.00	0.00
2,200.00	8.44	179.82	2,186.26	-196.57	0.60	0.19	0.00	0.00	0.00
2,300.00	8.44	179.82	2,285.18	-211.24	0.65	0.20	0.00	0.00	0.00
2,400.00	8.44	179.82	2,384.10	-225.92	0.69	0.21	0.00	0.00	0.00
2,500.00	8.44	179.82	2,483.01	-240.59	0.74	0.23	0.00	0.00	0.00
2,600.00	8.44	179.82	2,581.93	-255.27	0.78	0.24	0.00	0.00	0.00
2,700.00	8.44	179.82	2,680.85	-269.95	0.83	0.26	0.00	0.00	0.00
2,800.00	8.44	179.82	2,779.77	-284.62	0.87	0.27	0.00	0.00	0.00
2,900.00	8.44	179.82	2,878.68	-299.30	0.92	0.28	0.00	0.00	0.00
3,000.00	8.44	179.82	2,977.60	-313.97	0.96	0.30	0.00	0.00	0.00
3,100.00	8.44	179.82	3,076.52	-328.65	1.01	0.31	0.00	0.00	0.00
3,200.00	8.44	179.82	3,175.43	-343.32	1.05	0.32	0.00	0.00	0.00
3,300.00	8.44	179.82	3,274.35	-358.00	1.10	0.34	0.00	0.00	0.00
3,400.00	8.44	179.82	3,373.27	-372.68	1.14	0.35	0.00	0.00	0.00
3,500.00	8.44	179.82	3,472.19	-387.35	1.19	0.37	0.00	0.00	0.00
3,600.00	8.44	179.82	3,571.10	-402.03	1.23	0.38	0.00	0.00	0.00
3,700.00	8.44	179.82	3,670.02	-416.70	1.28	0.39	0.00	0.00	0.00
3,800.00	8.44	179.82	3,768.94	-431.38	1.32	0.41	0.00	0.00	0.00
3,900.00	8.44	179.82	3,867.86	-446.05	1.37	0.42	0.00	0.00	0.00
4,000.00	8.44	179.82	3,966.77	-460.73	1.41	0.44	0.00	0.00	0.00
4,100.00	8.44	179.82	4,065.69	-475.41	1.46	0.45	0.00	0.00	0.00
4,200.00	8.44	179.82	4,164.61	-490.08	1.50	0.46	0.00	0.00	0.00
4,300.00	8.44	179.82	4,263.52	-504.76	1.55	0.48	0.00	0.00	0.00
4,400.00	8.44	179.82	4,362.44	-519.43	1.59	0.49	0.00	0.00	0.00
4,500.00	8.44	179.82	4,461.36	-534.11	1.64	0.51	0.00	0.00	0.00
4,600.00	8.44	179.82	4,560.28	-548.78	1.68	0.52	0.00	0.00	0.00
4,700.00	8.44	179.82	4,659.19	-563.46	1.73	0.53	0.00	0.00	0.00
4,800.00	8.44	179.82	4,758.11	-578.14	1.77	0.55	0.00	0.00	0.00
4,900.00	8.44	179.82	4,857.03	-592.81	1.82	0.56	0.00	0.00	0.00
5,000.00	8.44	179.82	4,955.95	-607.49	1.86	0.57	0.00	0.00	0.00
5,100.00	8.44	179.82	5,054.86	-622.16	1.91	0.59	0.00	0.00	0.00

SANTO PETROLEUM

Planning Report

WELLBENDERS DIRECTIONAL SERVICES

Database:	WBDS_SQL_2	**Local Co-ordinate Reference:**	Well WCD 3H
Company:	Santo Petroleum	**TVD Reference:**	Est RKB = 25' @ 3121.00usft
Project:	Eddy County, NM (NAD 83 - NME)	**MD Reference:**	Est RKB = 25' @ 3121.00usft
Site:	Caveman 7-12	**North Reference:**	Grid
Well:	WCD 3H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	PERMIT-v2		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
5,200.00	8.44	179.82	5,153.78	-636.84	1.95	0.60	0.00	0.00	0.00
5,300.00	8.44	179.82	5,252.70	-651.51	2.00	0.62	0.00	0.00	0.00
5,400.00	8.44	179.82	5,351.61	-666.19	2.04	0.63	0.00	0.00	0.00
5,500.00	8.44	179.82	5,450.53	-680.87	2.09	0.64	0.00	0.00	0.00
5,600.00	8.44	179.82	5,549.45	-695.54	2.13	0.66	0.00	0.00	0.00
5,700.00	8.44	179.82	5,648.37	-710.22	2.18	0.67	0.00	0.00	0.00
5,800.00	8.44	179.82	5,747.28	-724.89	2.22	0.69	0.00	0.00	0.00
5,900.00	8.44	179.82	5,846.20	-739.57	2.27	0.70	0.00	0.00	0.00
6,000.00	8.44	179.82	5,945.12	-754.24	2.31	0.71	0.00	0.00	0.00
6,100.00	8.44	179.82	6,044.03	-768.92	2.36	0.73	0.00	0.00	0.00
6,200.00	8.44	179.82	6,142.95	-783.60	2.40	0.74	0.00	0.00	0.00
6,300.00	8.44	179.82	6,241.87	-798.27	2.45	0.75	0.00	0.00	0.00
6,400.00	8.44	179.82	6,340.79	-812.95	2.49	0.77	0.00	0.00	0.00
6,500.00	8.44	179.82	6,439.70	-827.62	2.54	0.78	0.00	0.00	0.00
6,600.00	8.44	179.82	6,538.62	-842.30	2.58	0.80	0.00	0.00	0.00
6,700.00	8.44	179.82	6,637.54	-856.97	2.63	0.81	0.00	0.00	0.00
6,800.00	8.44	179.82	6,736.46	-871.65	2.67	0.82	0.00	0.00	0.00
6,900.00	8.44	179.82	6,835.37	-886.33	2.72	0.84	0.00	0.00	0.00
7,000.00	8.44	179.82	6,934.29	-901.00	2.76	0.85	0.00	0.00	0.00
7,100.00	8.44	179.82	7,033.21	-915.68	2.81	0.87	0.00	0.00	0.00
7,200.00	8.44	179.82	7,132.12	-930.35	2.85	0.88	0.00	0.00	0.00
7,300.00	8.44	179.82	7,231.04	-945.03	2.90	0.89	0.00	0.00	0.00
7,400.00	8.44	179.82	7,329.96	-959.70	2.94	0.91	0.00	0.00	0.00
7,500.00	8.44	179.82	7,428.88	-974.38	2.99	0.92	0.00	0.00	0.00
7,600.00	8.44	179.82	7,527.79	-989.06	3.03	0.94	0.00	0.00	0.00
7,700.00	8.44	179.82	7,626.71	-1,003.73	3.08	0.95	0.00	0.00	0.00
7,800.00	8.44	179.82	7,725.63	-1,018.41	3.13	0.96	0.00	0.00	0.00
7,900.00	8.44	179.82	7,824.55	-1,033.08	3.17	0.98	0.00	0.00	0.00
8,000.00	8.44	179.82	7,923.46	-1,047.76	3.22	0.99	0.00	0.00	0.00
8,093.16	8.44	179.82	8,015.61	-1,061.43	3.26	1.00	0.00	0.00	0.00
8,100.00	8.30	179.82	8,022.38	-1,062.43	3.26	1.00	2.00	-2.00	0.00
8,200.00	6.30	179.82	8,121.56	-1,075.14	3.30	1.02	2.00	-2.00	0.00
8,300.00	4.30	179.82	8,221.13	-1,084.38	3.33	1.03	2.00	-2.00	0.00
8,400.00	2.30	179.82	8,320.96	-1,090.14	3.35	1.03	2.00	-2.00	0.00
8,500.00	0.30	179.82	8,420.93	-1,092.41	3.35	1.03	2.00	-2.00	0.00
8,515.11	0.00	269.77	8,436.04	-1,092.45	3.35	1.03	2.00	-2.00	0.00
8,600.00	0.00	0.00	8,520.93	-1,092.45	3.35	1.03	0.00	0.00	0.00
8,700.00	0.00	0.00	8,620.93	-1,092.45	3.35	1.03	0.00	0.00	0.00
8,800.00	0.00	0.00	8,720.93	-1,092.45	3.35	1.03	0.00	0.00	0.00
8,815.11	0.00	269.77	8,736.04	-1,092.45	3.35	1.03	0.00	0.00	0.00
8,850.00	3.49	269.77	8,770.91	-1,092.45	2.29	2.09	10.00	10.00	0.00
8,900.00	8.49	269.77	8,820.62	-1,092.47	-2.92	7.31	10.00	10.00	0.00
8,950.00	13.49	269.77	8,869.69	-1,092.51	-12.45	16.84	10.00	10.00	0.00
9,000.00	18.49	269.77	8,917.74	-1,092.56	-26.22	30.61	10.00	10.00	0.00
9,050.00	23.49	269.77	8,964.41	-1,092.63	-44.12	48.51	10.00	10.00	0.00
9,100.00	28.49	269.77	9,009.34	-1,092.72	-66.03	70.41	10.00	10.00	0.00
9,150.00	33.49	269.77	9,052.19	-1,092.82	-91.76	96.15	10.00	10.00	0.00
9,200.00	38.49	269.77	9,092.63	-1,092.94	-121.13	125.52	10.00	10.00	0.00
9,250.00	43.49	269.77	9,130.36	-1,093.07	-153.92	158.30	10.00	10.00	0.00
9,300.00	48.49	269.77	9,165.09	-1,093.21	-189.87	194.25	10.00	10.00	0.00
9,350.00	53.49	269.77	9,196.55	-1,093.36	-228.70	233.09	10.00	10.00	0.00
9,400.00	58.49	269.77	9,224.51	-1,093.52	-270.14	274.52	10.00	10.00	0.00
9,450.00	63.49	269.77	9,248.75	-1,093.69	-313.85	318.24	10.00	10.00	0.00
9,500.00	68.49	269.77	9,269.09	-1,093.87	-359.51	363.90	10.00	10.00	0.00

SANTO PETROLEUM

Planning Report

WELLBENDERS DIRECTIONAL SERVICES

Database:	WBDS_SQL_2	**Local Co-ordinate Reference:**	Well WCD 3H
Company:	Santo Petroleum	**TVD Reference:**	Est RKB = 25' @ 3121.00usft
Project:	Eddy County, NM (NAD 83 - NME)	**MD Reference:**	Est RKB = 25' @ 3121.00usft
Site:	Caveman 7-12	**North Reference:**	Grid
Well:	WCD 3H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	PERMIT-v2		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
9,550.00	73.49	269.77	9,285.37	-1,094.06	-406.77	411.15	10.00	10.00	0.00
9,600.00	78.49	269.77	9,297.48	-1,094.25	-455.26	459.65	10.00	10.00	0.00
9,650.00	83.49	269.77	9,305.30	-1,094.44	-504.63	509.02	10.00	10.00	0.00
9,700.00	88.49	269.77	9,308.80	-1,094.64	-554.49	558.88	10.00	10.00	0.00
9,715.11	90.00	269.77	9,309.00	-1,094.70	-569.60	573.99	10.00	10.00	0.00
9,800.00	90.00	269.77	9,309.00	-1,095.03	-654.49	658.88	0.00	0.00	0.00
9,900.00	90.00	269.77	9,309.00	-1,095.43	-754.49	758.88	0.00	0.00	0.00
10,000.00	90.00	269.77	9,309.00	-1,095.82	-854.49	858.88	0.00	0.00	0.00
10,100.00	90.00	269.77	9,309.00	-1,096.21	-954.49	958.88	0.00	0.00	0.00
10,200.00	90.00	269.77	9,309.00	-1,096.61	-1,054.48	1,058.88	0.00	0.00	0.00
10,300.00	90.00	269.77	9,309.00	-1,097.00	-1,154.48	1,158.88	0.00	0.00	0.00
10,400.00	90.00	269.77	9,309.00	-1,097.39	-1,254.48	1,258.88	0.00	0.00	0.00
10,500.00	90.00	269.77	9,309.00	-1,097.78	-1,354.48	1,358.88	0.00	0.00	0.00
10,600.00	90.00	269.77	9,309.00	-1,098.18	-1,454.48	1,458.88	0.00	0.00	0.00
10,700.00	90.00	269.77	9,309.00	-1,098.57	-1,554.48	1,558.88	0.00	0.00	0.00
10,800.00	90.00	269.77	9,309.00	-1,098.96	-1,654.48	1,658.88	0.00	0.00	0.00
10,900.00	90.00	269.77	9,309.00	-1,099.36	-1,754.48	1,758.88	0.00	0.00	0.00
11,000.00	90.00	269.77	9,309.00	-1,099.75	-1,854.48	1,858.88	0.00	0.00	0.00
11,100.00	90.00	269.77	9,309.00	-1,100.14	-1,954.48	1,958.88	0.00	0.00	0.00
11,200.00	90.00	269.77	9,309.00	-1,100.54	-2,054.48	2,058.88	0.00	0.00	0.00
11,300.00	90.00	269.77	9,309.00	-1,100.93	-2,154.48	2,158.88	0.00	0.00	0.00
11,400.00	90.00	269.77	9,309.00	-1,101.32	-2,254.48	2,258.88	0.00	0.00	0.00
11,500.00	90.00	269.77	9,309.00	-1,101.71	-2,354.47	2,358.88	0.00	0.00	0.00
11,600.00	90.00	269.77	9,309.00	-1,102.11	-2,454.47	2,458.88	0.00	0.00	0.00
11,700.00	90.00	269.77	9,309.00	-1,102.50	-2,554.47	2,558.88	0.00	0.00	0.00
11,800.00	90.00	269.77	9,309.00	-1,102.89	-2,654.47	2,658.88	0.00	0.00	0.00
11,900.00	90.00	269.77	9,309.00	-1,103.29	-2,754.47	2,758.88	0.00	0.00	0.00
12,000.00	90.00	269.77	9,309.00	-1,103.68	-2,854.47	2,858.88	0.00	0.00	0.00
12,100.00	90.00	269.77	9,309.00	-1,104.07	-2,954.47	2,958.88	0.00	0.00	0.00
12,200.00	90.00	269.77	9,309.00	-1,104.47	-3,054.47	3,058.88	0.00	0.00	0.00
12,300.00	90.00	269.77	9,309.00	-1,104.86	-3,154.47	3,158.88	0.00	0.00	0.00
12,400.00	90.00	269.77	9,309.00	-1,105.25	-3,254.47	3,258.88	0.00	0.00	0.00
12,500.00	90.00	269.77	9,309.00	-1,105.64	-3,354.47	3,358.88	0.00	0.00	0.00
12,600.00	90.00	269.77	9,309.00	-1,106.04	-3,454.47	3,458.88	0.00	0.00	0.00
12,700.00	90.00	269.77	9,309.00	-1,106.43	-3,554.47	3,558.88	0.00	0.00	0.00
12,800.00	90.00	269.77	9,309.00	-1,106.82	-3,654.46	3,658.88	0.00	0.00	0.00
12,900.00	90.00	269.77	9,309.00	-1,107.22	-3,754.46	3,758.88	0.00	0.00	0.00
13,000.00	90.00	269.77	9,309.00	-1,107.61	-3,854.46	3,858.88	0.00	0.00	0.00
13,100.00	90.00	269.77	9,309.00	-1,108.00	-3,954.46	3,958.88	0.00	0.00	0.00
13,200.00	90.00	269.77	9,309.00	-1,108.40	-4,054.46	4,058.88	0.00	0.00	0.00
13,300.00	90.00	269.77	9,309.00	-1,108.79	-4,154.46	4,158.88	0.00	0.00	0.00
13,400.00	90.00	269.77	9,309.00	-1,109.18	-4,254.46	4,258.88	0.00	0.00	0.00
13,500.00	90.00	269.77	9,309.00	-1,109.57	-4,354.46	4,358.88	0.00	0.00	0.00
13,600.00	90.00	269.77	9,309.00	-1,109.97	-4,454.46	4,458.88	0.00	0.00	0.00
13,700.00	90.00	269.77	9,309.00	-1,110.36	-4,554.46	4,558.88	0.00	0.00	0.00
13,800.00	90.00	269.77	9,309.00	-1,110.75	-4,654.46	4,658.88	0.00	0.00	0.00
13,900.00	90.00	269.77	9,309.00	-1,111.15	-4,754.46	4,758.88	0.00	0.00	0.00
14,000.00	90.00	269.77	9,309.00	-1,111.54	-4,854.46	4,858.88	0.00	0.00	0.00
14,100.00	90.00	269.77	9,309.00	-1,111.93	-4,954.45	4,958.88	0.00	0.00	0.00
14,200.00	90.00	269.77	9,309.00	-1,112.33	-5,054.45	5,058.88	0.00	0.00	0.00
14,300.00	90.00	269.77	9,309.00	-1,112.72	-5,154.45	5,158.88	0.00	0.00	0.00
14,321.23	90.00	269.77	9,309.00	-1,112.80	-5,175.68	5,180.11	0.00	0.00	0.00
14,340.23	90.38	269.77	9,308.94	-1,112.88	-5,194.69	5,199.11	2.00	2.00	-0.03
14,400.00	90.38	269.77	9,308.54	-1,113.12	-5,254.45	5,258.88	0.00	0.00	0.00

SANTO PETROLEUM

Planning Report

WELLBENDERS DIRECTIONAL SERVICES

Database:	WBDS_SQL_2	**Local Co-ordinate Reference:**	Well WCD 3H
Company:	Santo Petroleum	**TVD Reference:**	Est RKB = 25' @ 3121.00usft
Project:	Eddy County, NM (NAD 83 - NME)	**MD Reference:**	Est RKB = 25' @ 3121.00usft
Site:	Caveman 7-12	**North Reference:**	Grid
Well:	WCD 3H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	PERMIT-v2		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
14,500.00	90.38	269.77	9,307.88	-1,113.52	-5,354.45	5,358.87	0.00	0.00	0.00
14,600.00	90.38	269.77	9,307.21	-1,113.92	-5,454.44	5,458.87	0.00	0.00	0.00
14,700.00	90.38	269.77	9,306.55	-1,114.32	-5,554.44	5,558.87	0.00	0.00	0.00
14,800.00	90.38	269.77	9,305.89	-1,114.72	-5,654.44	5,658.87	0.00	0.00	0.00
14,900.00	90.38	269.77	9,305.22	-1,115.12	-5,754.44	5,758.87	0.00	0.00	0.00
15,000.00	90.38	269.77	9,304.56	-1,115.53	-5,854.43	5,858.86	0.00	0.00	0.00
15,100.00	90.38	269.77	9,303.90	-1,115.93	-5,954.43	5,958.86	0.00	0.00	0.00
15,200.00	90.38	269.77	9,303.24	-1,116.33	-6,054.43	6,058.86	0.00	0.00	0.00
15,300.00	90.38	269.77	9,302.57	-1,116.73	-6,154.42	6,158.86	0.00	0.00	0.00
15,400.00	90.38	269.77	9,301.91	-1,117.13	-6,254.42	6,258.85	0.00	0.00	0.00
15,500.00	90.38	269.77	9,301.25	-1,117.53	-6,354.42	6,358.85	0.00	0.00	0.00
15,600.00	90.38	269.77	9,300.58	-1,117.93	-6,454.41	6,458.85	0.00	0.00	0.00
15,700.00	90.38	269.77	9,299.92	-1,118.34	-6,554.41	6,558.85	0.00	0.00	0.00
15,800.00	90.38	269.77	9,299.26	-1,118.74	-6,654.41	6,658.85	0.00	0.00	0.00
15,900.00	90.38	269.77	9,298.59	-1,119.14	-6,754.41	6,758.84	0.00	0.00	0.00
16,000.00	90.38	269.77	9,297.93	-1,119.54	-6,854.40	6,858.84	0.00	0.00	0.00
16,100.00	90.38	269.77	9,297.27	-1,119.94	-6,954.40	6,958.84	0.00	0.00	0.00
16,200.00	90.38	269.77	9,296.60	-1,120.34	-7,054.40	7,058.84	0.00	0.00	0.00
16,300.00	90.38	269.77	9,295.94	-1,120.74	-7,154.39	7,158.83	0.00	0.00	0.00
16,400.00	90.38	269.77	9,295.28	-1,121.15	-7,254.39	7,258.83	0.00	0.00	0.00
16,500.00	90.38	269.77	9,294.61	-1,121.55	-7,354.39	7,358.83	0.00	0.00	0.00
16,600.00	90.38	269.77	9,293.95	-1,121.95	-7,454.38	7,458.83	0.00	0.00	0.00
16,700.00	90.38	269.77	9,293.29	-1,122.35	-7,554.38	7,558.83	0.00	0.00	0.00
16,800.00	90.38	269.77	9,292.62	-1,122.75	-7,654.38	7,658.82	0.00	0.00	0.00
16,900.00	90.38	269.77	9,291.96	-1,123.15	-7,754.38	7,758.82	0.00	0.00	0.00
17,009.42	90.38	269.77	9,291.23	-1,123.59	-7,863.79	7,868.24	0.00	0.00	0.00
17,066.64	91.52	269.78	9,290.28	-1,123.82	-7,921.00	7,925.45	2.00	2.00	0.02
17,100.00	91.52	269.78	9,289.40	-1,123.95	-7,954.35	7,958.80	0.00	0.00	0.00
17,200.00	91.52	269.78	9,286.74	-1,124.33	-8,054.31	8,058.76	0.00	0.00	0.00
17,300.00	91.52	269.78	9,284.08	-1,124.72	-8,154.28	8,158.73	0.00	0.00	0.00
17,400.00	91.52	269.78	9,281.42	-1,125.10	-8,254.24	8,258.69	0.00	0.00	0.00
17,500.00	91.52	269.78	9,278.76	-1,125.49	-8,354.21	8,358.66	0.00	0.00	0.00
17,600.00	91.52	269.78	9,276.10	-1,125.87	-8,454.17	8,458.62	0.00	0.00	0.00
17,700.00	91.52	269.78	9,273.44	-1,126.26	-8,554.13	8,558.59	0.00	0.00	0.00
17,800.00	91.52	269.78	9,270.78	-1,126.64	-8,654.10	8,658.55	0.00	0.00	0.00
17,900.00	91.52	269.78	9,268.12	-1,127.03	-8,754.06	8,758.52	0.00	0.00	0.00
18,000.00	91.52	269.78	9,265.46	-1,127.41	-8,854.03	8,858.48	0.00	0.00	0.00
18,100.00	91.52	269.78	9,262.80	-1,127.80	-8,953.99	8,958.44	0.00	0.00	0.00
18,200.00	91.52	269.78	9,260.14	-1,128.18	-9,053.95	9,058.41	0.00	0.00	0.00
18,300.00	91.52	269.78	9,257.48	-1,128.57	-9,153.92	9,158.37	0.00	0.00	0.00
18,400.00	91.52	269.78	9,254.82	-1,128.95	-9,253.88	9,258.34	0.00	0.00	0.00
18,500.00	91.52	269.78	9,252.16	-1,129.34	-9,353.85	9,358.30	0.00	0.00	0.00
18,600.00	91.52	269.78	9,249.50	-1,129.72	-9,453.81	9,458.27	0.00	0.00	0.00
18,700.00	91.52	269.78	9,246.84	-1,130.11	-9,553.77	9,558.23	0.00	0.00	0.00
18,800.00	91.52	269.78	9,244.18	-1,130.49	-9,653.74	9,658.20	0.00	0.00	0.00
18,900.00	91.52	269.78	9,241.52	-1,130.88	-9,753.70	9,758.16	0.00	0.00	0.00
19,000.00	91.52	269.78	9,238.86	-1,131.27	-9,853.66	9,858.13	0.00	0.00	0.00
19,100.00	91.52	269.78	9,236.20	-1,131.65	-9,953.63	9,958.09	0.00	0.00	0.00
19,200.00	91.52	269.78	9,233.54	-1,132.04	-10,053.59	10,058.06	0.00	0.00	0.00
19,300.00	91.52	269.78	9,230.88	-1,132.42	-10,153.56	10,158.02	0.00	0.00	0.00
19,400.00	91.52	269.78	9,228.22	-1,132.81	-10,253.52	10,257.98	0.00	0.00	0.00
19,500.00	91.52	269.78	9,225.56	-1,133.19	-10,353.48	10,357.95	0.00	0.00	0.00
19,600.00	91.52	269.78	9,222.90	-1,133.58	-10,453.45	10,457.91	0.00	0.00	0.00
19,700.00	91.52	269.78	9,220.24	-1,133.96	-10,553.41	10,557.88	0.00	0.00	0.00

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Planning Report

WELLBENDERS DIRECTIONAL SERVICES

Database:	WBDS_SQL_2	**Local Co-ordinate Reference:**	Well WCD 3H
Company:	Santo Petroleum	**TVD Reference:**	Est RKB = 25' @ 3121.00usft
Project:	Eddy County, NM (NAD 83 - NME)	**MD Reference:**	Est RKB = 25' @ 3121.00usft
Site:	Caveman 7-12	**North Reference:**	Grid
Well:	WCD 3H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	PERMIT-v2		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
19,800.00	91.52	269.78	9,217.58	-1,134.35	-10,653.38	10,657.84	0.00	0.00	0.00
19,900.00	91.52	269.78	9,214.92	-1,134.73	-10,753.34	10,757.81	0.00	0.00	0.00
20,000.00	91.52	269.78	9,212.26	-1,135.12	-10,853.30	10,857.77	0.00	0.00	0.00
20,047.21	91.52	269.78	9,211.00	-1,135.30	-10,900.50	10,904.97	0.00	0.00	0.00

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
LTP Caveman: 1980' I - plan misses target center by 9213.88usft at 20047.21usft MD (9211.00 TVD, -1135.30 N, -10900.50 E) - Point	0.00	0.00	0.00	-1,136.10	-10,670.20	511,229.50	565,814.10	32.405413	-104.254023
SHL Caveman: 2291' - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	512,365.60	576,484.30	32.408509	-104.219445
PBHL Caveman: 198(- plan hits target center - Point	0.00	0.00	9,211.00	-1,135.30	-10,900.50	511,230.30	565,583.80	32.405415	-104.254769
FTP Caveman: 1980' - plan hits target center - Point	0.00	0.00	9,309.00	-1,094.70	-569.60	511,270.90	575,914.70	32.405502	-104.221294

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Hydrogen Sulfide Drilling Operations Plan

SPC Resources, LLC
101 S. 4th Street, Suite B
Artesia, NM 88210
(575) 736-3250

1. H_2S Safety Instructions to the following:
    - Characteristics of H_2S.
    - Physical effects and hazards.
    - Principal and operation of H_2S detectors, warning system and briefing areas.
    - Evacuation procedures, routes and First Aid.
    - Proper use of safety equipment and life support systems.
    - Essential personnel meeting medical evaluation criteria will receive additional training on the proper use of 30 min pressure demand air packs.

2. H_2S Detection & Alarm Systems:
    - H_2S sensor/detectors to be located on the drilling rig floor, in the base of the sub structure/cellar area, on the mud returns pits by the shale shaker. Additional H_2S monitors may be placed as deemed necessary.
    - An audio alarm system will be installed on the derrick, the floor, and in the doghouse.

3. Windsocks and Wind Streamers:
    - Windsocks at mud pit area should be high enough to be visible.
    - Windsock on the rig floor/top of doghouse should be high enough to be visible.

4. Condition Flags & Signs:
    - Warning sign on access road to location
    - Flags to be displayed on sign at entrance to location
        i. Green Flag – Normal Safe Operation Condition
        ii. Yellow Flag – Potential Pressure and Danger
        iii. Red Flag – Danger (H_2S present in dangerous concentrations) Only H_2S trained personnel admitted on location

5. Well Control Equipment:
    - See attached APD

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6. Communications:
   - While working under masks, chalkboards will be used for communications
   - Hand signals will be used where chalk board is inappropriate
   - Two way radio will be used to communicate off location in case of emergency help is required. In most cases cellular telephones will be available at drilling foreman's trailer or living quarters.

7. Drilling Stem Testing:
   - No Drill Stem Tests or hole coring is planned at this time.

8. Drilling contractor supervisor will be required to be familiar with the effects H_2S has on tubular goods and other mechanical equipment.

9. If H2S is encountered, mud system will be altered if necessary to maintain control of formation. A mud gas separator will be brought into service along with H2S scavenger chemicals if necessary.

10. Emergency Contacts:

Emergency Contact Information - Santo Personnel				
Santo Petroleum, LLC	**Artesia Office**	575-736-3250	**Houston**	713-600-7500
Key Parties at Santo Petroleum	**Title**	**Office**	**Mobile**	**Email**
Gary Waldrop	Field Land Manager	575-736-3256	469-261-3446	gwaldrop@santopetroleum.com
Lelan J Anders	VP, Operations	713-600-7502	281-908-1752	landers@santopetroleum.com
Hanson Yates	President	713-600-7503	713-412-2097	hyates@santopetroleum.com

Carlsbad, New Mexico:	
Ambulance	911
State Police	575-885-3137
City Police	575-885-2111
Sheriff's Office	575-887-7551
Fire Department	575-887-3798
Local Emergency Planning Committee	575-887-6544
New Mexico Oil Conservation Division	575-887-6544

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Santa Fe, New Mexico:	
New Mexico Emergency Response Commission	505-476-9600
New Mexico Emergency Response Commission (24 hr)	505-827-9126
New Mexico State Emergency Operations Center	505-476-9635

Federal Contacts:	
Carlsbad BLM Office	575-234-5972
National Emergency Response Center (Washington, DC)	800-424-8802

Medical:	
Flight for Life - Lubbock, TX	806-743-9911
AeroCare - Lubbock, TX	806-747-8923
Med Flight Air Ambulance - Albuquerque, NM	505-842-4433
SB Air Med Service - Albuquerque, NM	505-842-4949

Well Control/Other:	
Wild Well Control	281-784-4700
Boots & Coots IWC	800-256-9688
B.J. Services	575-746-3569
Halliburton	575-746-2757

Depth	Hole Size	Casing Data	Lithology	Fluid	Cement
80'	30"	20" 94# H-40		8.4 ppg FW Gel and Gel/LCM Sweeps	Ready-Mix @ Surface
425'	17-1/2"	13-3/8" 54.5# J-55 LTC	Top of Salt @ 456'	8.4 ppg FW Gel and Gel/LCM Sweeps	TOC @ Surface 100% Excess
2800'	12-1/4"	10 3/4" 40.5# L-80 LTC	Into the Delaware - through the worst of the sands	8.4 ppg FW Gel and Gel/LCM Sweeps	TOC @ Surface 100% Excess
20,047'	9-7/8" & 8-3/4"	5-1/2" 20# HCP-110 BTC	Bone Springs @ 5,146' Wolfcamp @ 8,694' TVD Top of Window @ 8,782' TVD Bottom of Window @ 8,806' TVD	10.0 ppg Oil Base Mud Add LCM as needed for seepage	Lead TOC @ Surface 100% Excess Tail TOC @ 6000' 50% Excess
CONGINENCY 7-5/8" L-80	9-7/8"	7 5/8" 29.7# P-110 BTC	Bottom of Curve in Wolfcamp M	10.0 ppg OBM	TOC @ Surface 100% Excess

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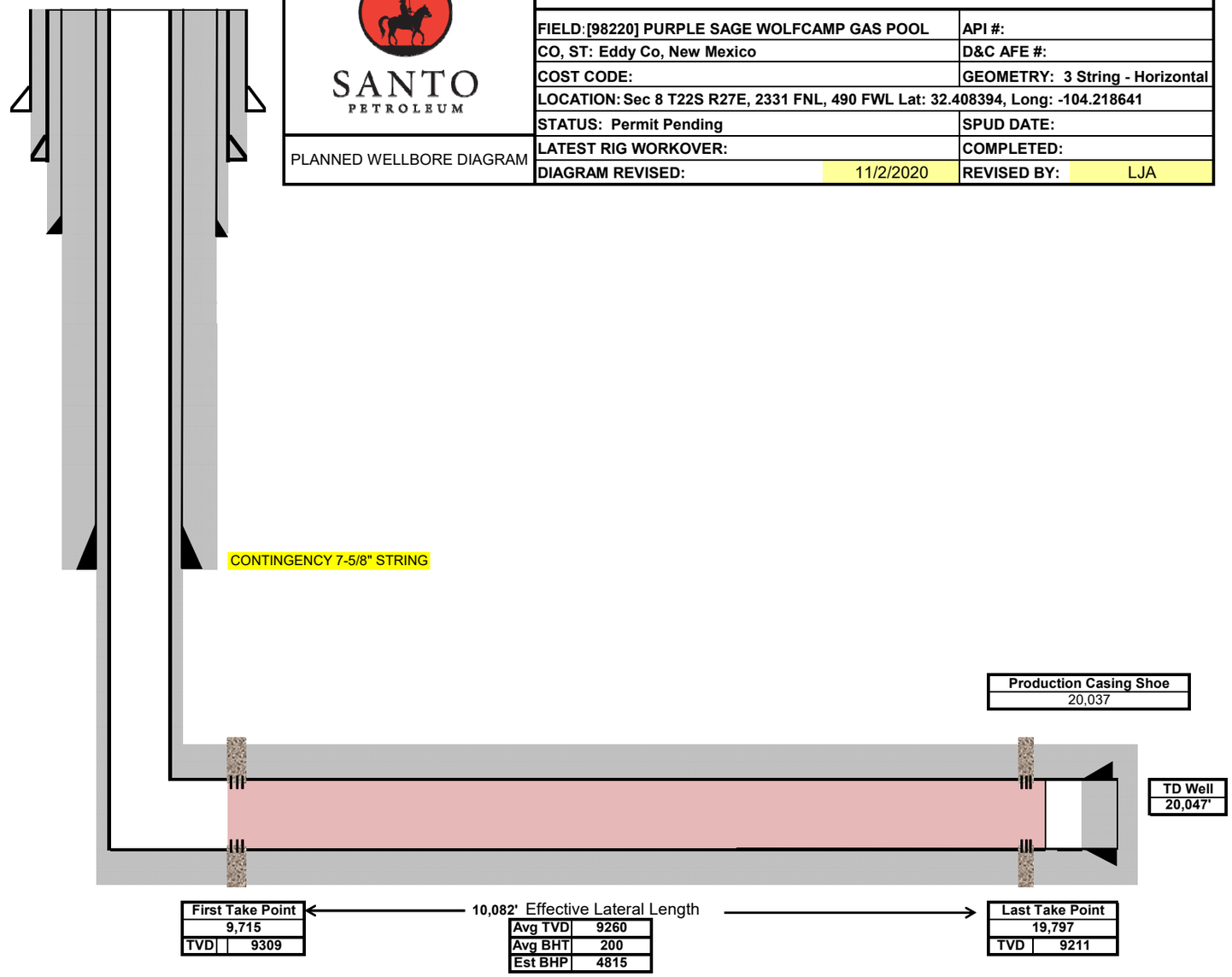
PLANNED WELLBORE DIAGRAM

Caveman 443H			
FIELD: [98220] PURPLE SAGE WOLFCAMP GAS POOL		API #:	
CO, ST: Eddy Co, New Mexico		D&C AFE #:	
COST CODE:		GEOMETRY: 3 String - Horizontal	
LOCATION: Sec 8 T22S R27E, 2331 FNL, 490 FWL Lat: 32.408394, Long: -104.218641			
STATUS: Permit Pending		SPUD DATE:	
LATEST RIG WORKOVER:		COMPLETED:	
DIAGRAM REVISED:	11/2/2020	REVISED BY:	LJA



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