

Well Name: HOGBACK DEEP 12	Well Location: T29N / R16W / SEC 20 / LOT 5 / 36.7172659 / -108.5539031	County or Parish/State: SAN JUAN / NM
Well Number: 40	Type of Well: OTHER	Allottee or Tribe Name: NAVAJO NATION
Lease Number: I-89-IND-58	Unit or CA Name:	Unit or CA Number:
US Well Number: 3004538246	Well Status: Drilling Well	Operator: VISION ENERGY GROUP LLC

Notice of Intent

Sundry ID: 2658039

Type of Submission: Notice of Intent	Type of Action: Other
Date Sundry Submitted: 02/19/2022	Time Sundry Submitted: 08:58
Date proposed operation will begin: 03/01/2022	

Procedure Description: Vision Energy Group, LLC respectfully requests the change to their BHL for their Hogback Deep 12 #40 helium well from 881’ FNL & 800’ FWL, Section 20, T-29-N, R-16-W, NWNW to 893’ FNL & 880’ FEL, Section 19, T-29-N, R-16-W, NENE. Please see attachments for additional information.

Surface Disturbance

Is any additional surface disturbance proposed?: No

NOI Attachments

Procedure Description

Hogback12_40_BHL_etc_Sundry_Attachment_20220219085651.pdf

Well Name: HOGBACK DEEP 12	Well Location: T29N / R16W / SEC 20 / LOT 5 / 36.7172659 / -108.5539031	County or Parish/State: SAN JUAN / NM
Well Number: 40	Type of Well: OTHER	Allottee or Tribe Name: NAVAJO NATION
Lease Number: I-89-IND-58	Unit or CA Name:	Unit or CA Number:
US Well Number: 3004538246	Well Status: Drilling Well	Operator: VISION ENERGY GROUP LLC

Operator Certification

I certify that the foregoing is true and correct. 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. Electronic submission of Sundry Notices through this system satisfies regulations requiring a submission of Form 3160-5 or a Sundry Notice.

Operator Electronic Signature: BRIAN WOOD	Signed on: FEB 19, 2022 08:56 AM
Name: VISION ENERGY GROUP LLC	
Title: President	
Street Address: 37 VERANO LOOP	
City: SANTA FE	State: NM
Phone: (505) 466-8120	
Email address: AFMSS@PERMITSWEST.COM	

Field Representative

Representative Name:		
Street Address:		
City:	State:	Zip:
Phone:		
Email address:		

BLM Point of Contact

BLM POC Name: KENNETH G RENNICK	BLM POC Title: Petroleum Engineer
BLM POC Phone: 5055647742	BLM POC Email Address: krennick@blm.gov
Disposition: Approved	Disposition Date: 03/02/2022
Signature: Kenneth Rennick	

DISTRICT I

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

DISTRICT II

811 S. First St., Artesia, N.M. 88210
Phone: (575) 748-1283 Fax: (575) 748-9720

DISTRICT III

1000 Rio Brazos Rd., Aztec, N.M. 87410
Phone: (505) 334-6178 Fax: (505) 334-6170

DISTRICT IV

1220 S. St. Francis Dr., Santa Fe, N.M. 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.
Santa Fe, N.M. 87505

Form C-102

Revised August 1, 2011

Submit one copy to appropriate

District Office

☐ AMENDED REPORT**WELL LOCATION AND ACREAGE DEDICATION PLAT**

¹ API Number 30-045-38246	² Pool Code 98047	³ Pool Name WC 29N16W20; LEADVILLE
⁴ Property Code 39891	⁵ Property Name HOGBACK DEEP 12	
⁷ GRID No. 280962	⁶ Operator Name VISION ENERGY GROUP, LLC	⁸ Well Number 4.0
		⁹ Elevation 5068

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
D	20	29 N	16 W	LOT 5	881	NORTH	800	WEST	SAN JUAN

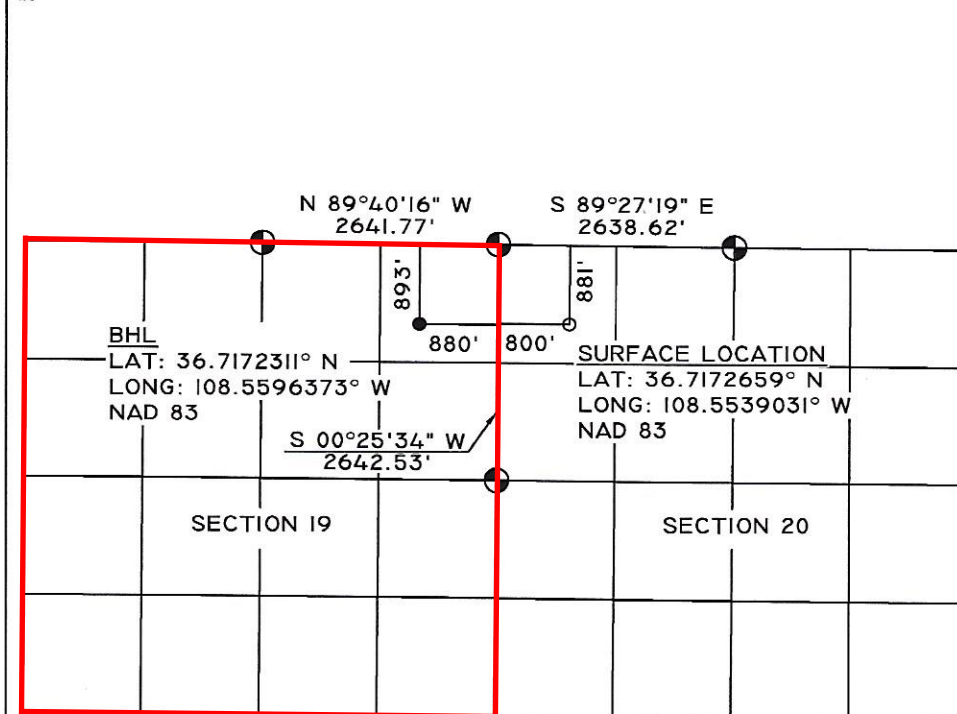
¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	19	29 N	16 W	LOT 6	893	NORTH	880	EAST	SAN JUAN

¹² Dedicated Acres 640.31	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ 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

16

**LEGEND**

- ⊕ = 2005 B.L.M. BRASS CAP
- = SURFACE LOCATION
- = BOTTOM HOLE LOCATION (BHL)

17 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.

Cory Walk
Signature

2-18-22
Date

Printed Name

Cory Walk

E-mail Address

cory@permitswest.com

18 SURVEYOR CERTIFICATION

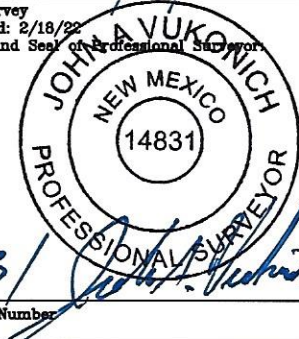
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

6/05/20

2/18/2022

Date of Survey
Plat Revised: 2/18/22

Signature and Seal of Professional Surveyor



Certificate Number

14931

CHANGE TO PLANS

Well Type

From: Vertical well

To: Directional well

Move Bottom Hole Location

From: 881' FNL & 800' FWL, Section 20, T-29-N, R-16-W, NWNW

To: 893' FNL & 880' FEL, Section 19, T-29-N, R-16-W, NENE

Please see attached plat, directional plan, anticollision report and drill program tables for additional information.

**Vision Energy Group LLC
Hogback Deep 12 #40
881' FNL & 800' FWL
Sec. 20, T. 29 N., R. 16 W.
San Juan County, New Mexico**

PAGE 1

ESTIMATED FORMATION TOPS

Formation & Lithology	TVD	MD	Contents
Mancos shale	000'	000'	water
Dakota sandstone	775'	776'	hydrocarbons
Morrison mudstone	985'	989'	water
Todilto sandstone	2040'	2080'	barren
Entrada sandstone	2069'	2110'	water
Chinle shale	2755'	2820'	barren
Shinarump conglomerate	3627'	3723'	barren
DeChelly sandstone	3732'	3831'	barren
Cutler sandstone	3973'	4081'	barren
Rico sandstone	5165'	5315'	barren
Honaker Trail limestone	5335'	5491'	barren
Ismay limestone	6025'	6205'	hydrocarbons
Desert Creek limestone	6185'	6371'	hydrocarbons
Akah shale	6210'	6396'	hydrocarbons
Barker Creek shale	6500'	6697'	hydrocarbons
Pinkerton Trail limestone	6668'	6871'	barren
Molas limestone	6794'	7001'	barren
Leadville limestone	6911'	7122'	hydrocarbons
Ouray limestone	7065'	7281'	barren
TD	7065'	7281'	barren



**Vision Energy Group LLC
Hogback Deep 12 #40
881' FNL & 800' FWL
Sec. 20, T. 29 N., R. 16 W.
San Juan County, New Mexico**

PAGE 2

CASING & CEMENT

All casing will be API and new.

Name	Hole OD	Casing OD	Tapered	Top MD	Bottom MD	Top TVD	BTM TVD	Grade	Weight	Thread	Collapse	Burst	Tension
Surface	17.5"	13.375"	No	0	300	0	300	H-40	48	STC	1.3	1.3	1.8
Intermediate	12.25"	9.625"	No	0	2147	0	2107	J-55	36	STC	1.3	1.3	1.8
Production	8.75"	7"	No	0	7282	0	7065	P-110	26	Butt	1.3	1.3	1.8

Name	Type	Top MD	Sacks	Yield	Cu. Ft	Weight	Excess	Cement	Additives
Surface	Tail	0	275	1.52	418	14.2	100%	G	4% bentonite
1st Intermediate	Lead	0	373	2.14	798	12.5	50%	Poz:Type III (90:10)	5% D-CSE 1 + 0.25#/sk Cello Flake + 0.4% D-MPA-1 + 1.4% D-SA 1 + 0.4 % D-CD 2 + 0.5% D-FP 1
	Tail	1647	170	1.38	235	14.6	50%	Type III Blend	0.5% Calcium Chloride + 0.25#/sk Cello Flake + 0.2% D-MPA 1
Production (Stage 1) DV Tool @ 5000'	Lead	5000	156	1.8	281	12.8	50%	Poz:Type III (35:65)	4% bentonite + 0.25#/sk Cello Flake + 1% D-MPA-2 + 0.2% D-R 3 + 0.5% D-FP 1
	Tail	6247	220	1.1	242	14.6	50%	Poz:Type III (60:40)	0.2% D-R 3 + 0.25#/sk Cello Flake
Production (Stage 2)	Lead	1800	495	1.8	891	12.8	50%	Poz:Type III (35:65)	4% bentonite + 0.25#/sk Cello Flake + 1% D-MPA-2 + 0.2% D-R 3 + 0.5% D-FP 1
	Tail	3965	102	1.1	112	14.6	0.5	Poz:Type III (60:40)	0.2% D-R 3 + 0.25#/sk Cello Flake

MUD PROGRAM

Type	Interval (MD)	lb/gal	Viscosity	Fluid Loss
fresh water spud	0' - 300'	8.5 - 9.0	30 - 45	NC
fresh water gel with PHPA & SAPP	300' - 2147'	10.0 - 11	38 - 46	8 - 10 cc
fresh water gel with PHPA & SAPP	2147' - 5200'	10.0 - 10.4	40 - 48	8 - 10 cc
fresh water gel with PHPA	5200' - 5700'	10.4 - 11.4	40 - 48	8 - 10 cc
fresh water gel with PHPA	5700' - 7282'	11.4 - 11.4	40 - 48	8 - 10 cc



VISION ENERGY GROUP

SAN JUAN, NEW MEXICO (NAD 83)

NW NW SEC. 20 T29N R16W

HOGBACK DEEP 12-40

ORIGINAL WELLBORE

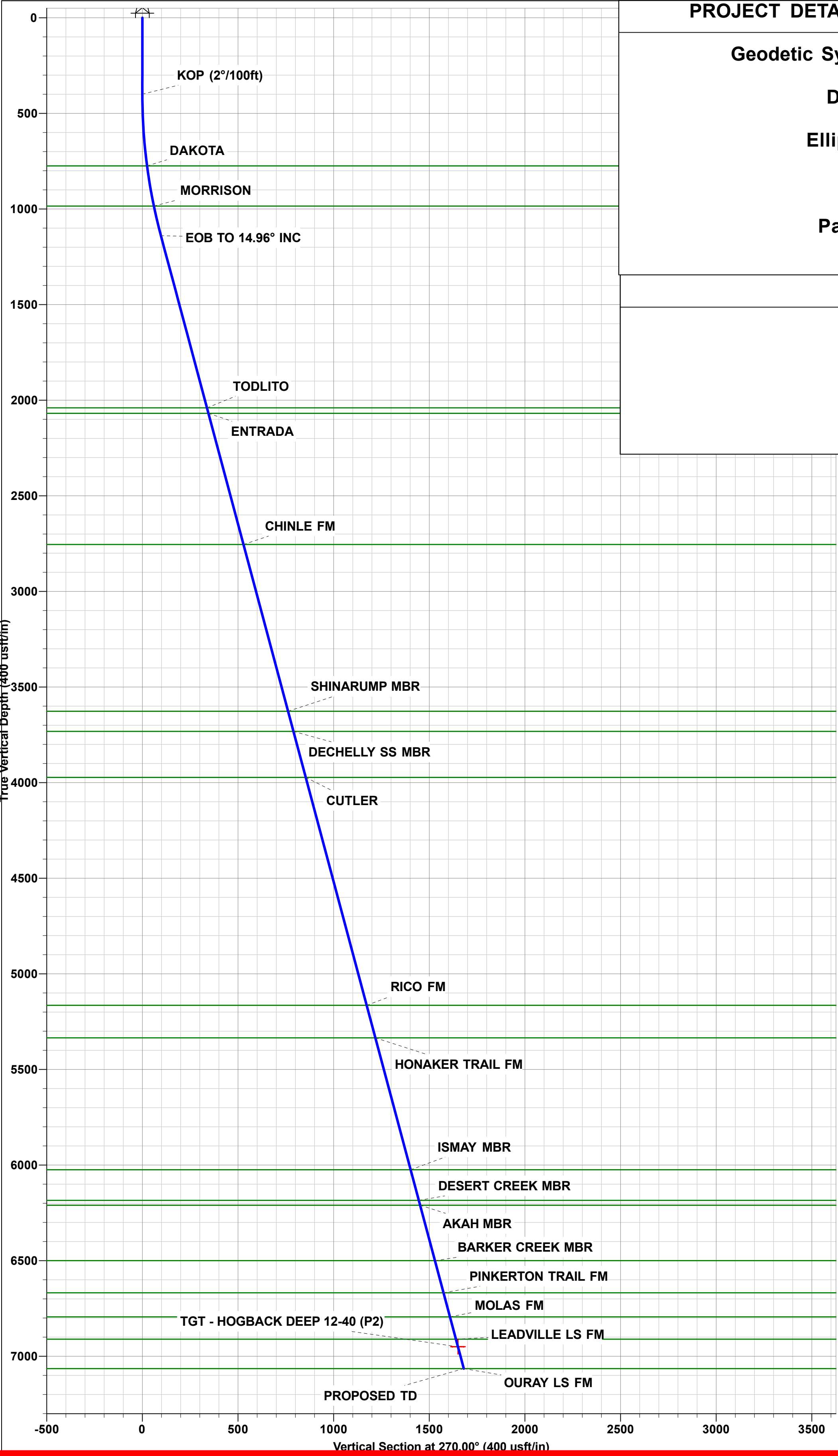
16 February, 2022

Plan: PROPOSAL #2

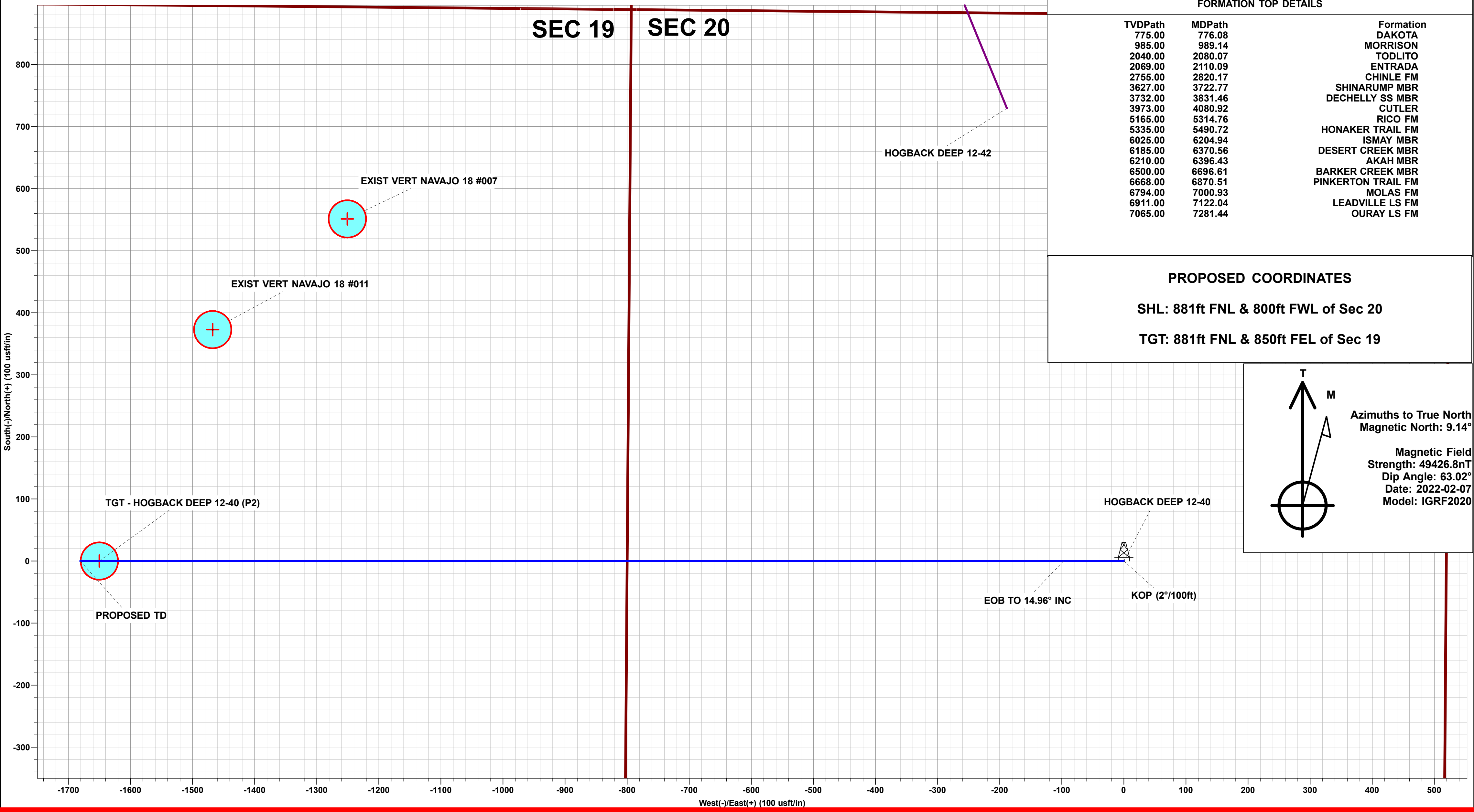




Project: SAN JUAN, NEW MEXICO (NAD 83)
Site: NW NW SEC. 20 T29N R16W
Well: HOGBACK DEEP 12-40
Wellbore: ORIGINAL WELLBORE
Design: PROPOSAL #2

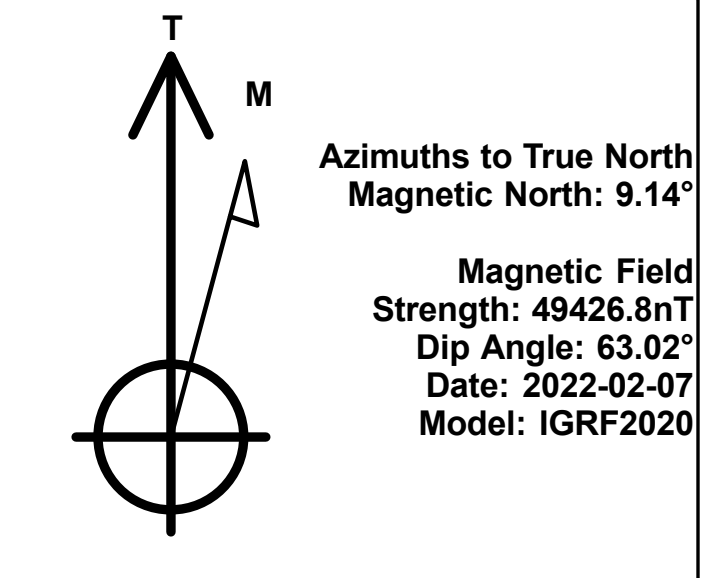


PROJECT DETAILS: SAN JUAN, NEW MEXICO (NAD 83)			WELL DETAILS: HOGBACK DEEP 12-40							
Geodetic System: US State Plane 1983 Datum: North American Datum 1983 Ellipsoid: GRS 1980 Zone: New Mexico Western Zone Padsite: NW NW SEC. 20 T29N R16W			Ground Level: 5068.00							
			+N/-S	+E/-W	Northing	Easting	Latitude	Longitude		
			0.00	0.00	2081194.65	2511901.34	36.717266	-108.553903		
			DESIGN TARGET DETAILS							
			Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
			TGT - HOGBACK DEEP 12-40 (P2)	6950.00	0.00	-1650.00	2081207.06	2510251.38	36.717266	-108.559533
ANNOTATIONS										
MD	Inc	Azi	TVD	+N/-S	+E/-W	VSect	Departure	Annotation		
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	KOP (2°/100ft)		
1148.16	14.96	270.00	1139.68	0.00	-97.14	97.14	97.14	EOB TO 14.96° INC		
7162.40	14.96	270.00	6950.00	0.00	-1650.00	1650.00	1650.00	TARGET		
7281.44	14.96	270.00	7065.00	0.00	-1680.73	1680.73	1680.73	PROPOSED TD		



FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
775.00	776.08	DAKOTA
985.00	989.14	MORRISON
2040.00	2080.07	TODLITO
2069.00	2110.09	ENTRADA
2755.00	2820.17	CHINLE FM
3627.00	3722.77	SHINARUMP MBR
3732.00	3831.46	DECHELLY SS MBR
3973.00	4080.92	CUTLER
5165.00	5314.76	RICO FM
5335.00	5490.72	HONAKER TRAIL FM
6025.00	6204.94	ISMAY MBR
6185.00	6370.56	DESERT CREEK MBR
6210.00	6396.43	AKAH MBR
6500.00	6696.61	BARKER CREEK MBR
6668.00	6870.51	PINKERTON TRAIL FM
6794.00	7000.93	MOLAS FM
6911.00	7122.04	LEADVILLE LS FM
7065.00	7281.44	OURAY LS FM

PROPOSED COORDINATES
SHL: 881ft FNL & 800ft FWL of Sec 20
TGT: 881ft FNL & 850ft FEL of Sec 19



Planning Report



Database:	Database 1	Local Co-ordinate Reference:	Well HOGBACK DEEP 12-40
Company:	VISION ENERGY GROUP	TVD Reference:	KBE @ 5085.00usft
Project:	SAN JUAN, NEW MEXICO (NAD 83)	MD Reference:	KBE @ 5085.00usft
Site:	NW NW SEC. 20 T29N R16W	North Reference:	True
Well:	HOGBACK DEEP 12-40	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #2		

Project	SAN JUAN, NEW MEXICO (NAD 83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Western Zone		

Site	NW NW SEC. 20 T29N R16W				
Site Position:		Northing:	2,081,194.65 usft	Latitude:	36.717266
From:	Lat/Long	Easting:	2,511,901.34 usft	Longitude:	-108.553903
Position Uncertainty:	0.00 usft	Slot Radius:	1.10 ft	Grid Convergence:	-0.43 °

Well	HOGBACK DEEP 12-40					
Well Position	+N/-S	0.00 usft	Northing:	2,081,194.65 usft	Latitude:	36.717266
	+E/-W	0.00 usft	Easting:	2,511,901.34 usft	Longitude:	-108.553903
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	5,068.00 usft

Wellbore	ORIGINAL WELLBORE				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	2022-02-07	9.14	63.02	49,426.77669338

Design	PROPOSAL #2				
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	270.00	

Plan Sections											
MD (usft)	Inc (°)	Azi (°)	Vertical Depth	SS (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usf)	Build Rate (°/100usf)	Turn Rate (°/100usf)	TFO (°)	Target
0.00	0.00	0.00	0.00	-5,085.00	0.00	0.00	0.00	0.00	0.00	0.00	
400.00	0.00	0.00	400.00	-4,685.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,148.16	14.96	270.00	1,139.68	-3,945.32	0.00	-97.14	2.00	2.00	0.00	270.00	
7,162.40	14.96	270.00	6,950.00	1,865.00	0.00	-1,650.00	0.00	0.00	0.00	0.00	TGT - HOGBACK C
7,281.44	14.96	270.00	7,065.00	1,980.00	0.00	-1,680.73	0.00	0.00	0.00	0.00	

Planning Report



Database:	Database 1	Local Co-ordinate Reference:	Well HOGBACK DEEP 12-40
Company:	VISION ENERGY GROUP	TVD Reference:	KBE @ 5085.00usft
Project:	SAN JUAN, NEW MEXICO (NAD 83)	MD Reference:	KBE @ 5085.00usft
Site:	NW NW SEC. 20 T29N R16W	North Reference:	True
Well:	HOGBACK DEEP 12-40	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #2		

Planned Survey										
MD (usft)	Inc (°)	Azi (°)	TVD (usft)	SS (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	5,085.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	4,985.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	4,885.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	4,785.00	0.00	0.00	0.00	0.00	0.00	0.00
KOP (2°/100ft)										
400.00	0.00	0.00	400.00	4,685.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	2.00	270.00	499.98	4,585.02	0.00	-1.75	1.75	2.00	2.00	0.00
600.00	4.00	270.00	599.84	4,485.16	0.00	-6.98	6.98	2.00	2.00	0.00
700.00	6.00	270.00	699.45	4,385.55	0.00	-15.69	15.69	2.00	2.00	0.00
DAKOTA										
776.08	7.52	270.00	775.00	4,310.00	0.00	-24.65	24.65	2.00	2.00	0.00
800.00	8.00	270.00	798.70	4,286.30	0.00	-27.88	27.88	2.00	2.00	0.00
900.00	10.00	270.00	897.47	4,187.53	0.00	-43.52	43.52	2.00	2.00	0.00
MORRISON										
989.14	11.78	270.00	985.00	4,100.00	0.00	-60.37	60.37	2.00	2.00	0.00
1,000.00	12.00	270.00	995.62	4,089.38	0.00	-62.60	62.60	2.00	2.00	0.00
1,100.00	14.00	270.00	1,093.06	3,991.94	0.00	-85.10	85.10	2.00	2.00	0.00
EOB TO 14.96° INC										
1,148.16	14.96	270.00	1,139.68	3,945.32	0.00	-97.14	97.14	2.00	2.00	0.00
1,200.00	14.96	270.00	1,189.77	3,895.23	0.00	-110.52	110.52	0.00	0.00	0.00
1,300.00	14.96	270.00	1,286.38	3,798.62	0.00	-136.34	136.34	0.00	0.00	0.00
1,400.00	14.96	270.00	1,382.99	3,702.01	0.00	-162.16	162.16	0.00	0.00	0.00
1,500.00	14.96	270.00	1,479.59	3,605.41	0.00	-187.98	187.98	0.00	0.00	0.00
1,600.00	14.96	270.00	1,576.20	3,508.80	0.00	-213.80	213.80	0.00	0.00	0.00
1,700.00	14.96	270.00	1,672.81	3,412.19	0.00	-239.62	239.62	0.00	0.00	0.00
1,800.00	14.96	270.00	1,769.42	3,315.58	0.00	-265.44	265.44	0.00	0.00	0.00
1,900.00	14.96	270.00	1,866.03	3,218.97	0.00	-291.26	291.26	0.00	0.00	0.00
2,000.00	14.96	270.00	1,962.64	3,122.36	0.00	-317.08	317.08	0.00	0.00	0.00
TODLITO										
2,080.07	14.96	270.00	2,040.00	3,045.00	0.00	-337.76	337.76	0.00	0.00	0.00
2,100.00	14.96	270.00	2,059.25	3,025.75	0.00	-342.90	342.90	0.00	0.00	0.00
ENTRADA										
2,110.09	14.96	270.00	2,069.00	3,016.00	0.00	-345.51	345.51	0.00	0.00	0.00
2,200.00	14.96	270.00	2,155.86	2,929.14	0.00	-368.72	368.72	0.00	0.00	0.00
2,300.00	14.96	270.00	2,252.47	2,832.53	0.00	-394.54	394.54	0.00	0.00	0.00
2,400.00	14.96	270.00	2,349.08	2,735.92	0.00	-420.36	420.36	0.00	0.00	0.00
2,500.00	14.96	270.00	2,445.69	2,639.31	0.00	-446.18	446.18	0.00	0.00	0.00
2,600.00	14.96	270.00	2,542.30	2,542.70	0.00	-472.00	472.00	0.00	0.00	0.00
2,700.00	14.96	270.00	2,638.91	2,446.09	0.00	-497.82	497.82	0.00	0.00	0.00
2,800.00	14.96	270.00	2,735.51	2,349.49	0.00	-523.64	523.64	0.00	0.00	0.00
CHINLE FM										
2,820.17	14.96	270.00	2,755.00	2,330.00	0.00	-528.85	528.85	0.00	0.00	0.00
2,900.00	14.96	270.00	2,832.12	2,252.88	0.00	-549.46	549.46	0.00	0.00	0.00
3,000.00	14.96	270.00	2,928.73	2,156.27	0.00	-575.28	575.28	0.00	0.00	0.00
3,100.00	14.96	270.00	3,025.34	2,059.66	0.00	-601.10	601.10	0.00	0.00	0.00
3,200.00	14.96	270.00	3,121.95	1,963.05	0.00	-626.92	626.92	0.00	0.00	0.00
3,300.00	14.96	270.00	3,218.56	1,866.44	0.00	-652.74	652.74	0.00	0.00	0.00
3,400.00	14.96	270.00	3,315.17	1,769.83	0.00	-678.56	678.56	0.00	0.00	0.00
3,500.00	14.96	270.00	3,411.78	1,673.22	0.00	-704.38	704.38	0.00	0.00	0.00
3,600.00	14.96	270.00	3,508.39	1,576.61	0.00	-730.20	730.20	0.00	0.00	0.00
3,700.00	14.96	270.00	3,605.00	1,480.00	0.00	-756.02	756.02	0.00	0.00	0.00
SHINARUMP MBR										
3,722.77	14.96	270.00	3,627.00	1,458.00	0.00	-761.90	761.90	0.00	0.00	0.00

Planning Report



Database:	Database 1	Local Co-ordinate Reference:	Well HOGBACK DEEP 12-40
Company:	VISION ENERGY GROUP	TVD Reference:	KBE @ 5085.00usft
Project:	SAN JUAN, NEW MEXICO (NAD 83)	MD Reference:	KBE @ 5085.00usft
Site:	NW NW SEC. 20 T29N R16W	North Reference:	True
Well:	HOGBACK DEEP 12-40	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #2		

Planned Survey										
MD (usft)	Inc (°)	Azi (°)	TVD (usft)	SS (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
3,800.00	14.96	270.00	3,701.61	1,383.39	0.00	-781.84	781.84	0.00	0.00	0.00
DECHELLY SS MBR										
3,831.46	14.96	270.00	3,732.00	1,353.00	0.00	-789.96	789.96	0.00	0.00	0.00
3,900.00	14.96	270.00	3,798.22	1,286.78	0.00	-807.66	807.66	0.00	0.00	0.00
4,000.00	14.96	270.00	3,894.83	1,190.17	0.00	-833.48	833.48	0.00	0.00	0.00
CUTLER										
4,080.92	14.96	270.00	3,973.00	1,112.00	0.00	-854.37	854.37	0.00	0.00	0.00
4,100.00	14.96	270.00	3,991.43	1,093.57	0.00	-859.30	859.30	0.00	0.00	0.00
4,200.00	14.96	270.00	4,088.04	996.96	0.00	-885.12	885.12	0.00	0.00	0.00
4,300.00	14.96	270.00	4,184.65	900.35	0.00	-910.94	910.94	0.00	0.00	0.00
4,400.00	14.96	270.00	4,281.26	803.74	0.00	-936.76	936.76	0.00	0.00	0.00
4,500.00	14.96	270.00	4,377.87	707.13	0.00	-962.57	962.57	0.00	0.00	0.00
4,600.00	14.96	270.00	4,474.48	610.52	0.00	-988.39	988.39	0.00	0.00	0.00
4,700.00	14.96	270.00	4,571.09	513.91	0.00	-1,014.21	1,014.21	0.00	0.00	0.00
4,800.00	14.96	270.00	4,667.70	417.30	0.00	-1,040.03	1,040.03	0.00	0.00	0.00
4,900.00	14.96	270.00	4,764.31	320.69	0.00	-1,065.85	1,065.85	0.00	0.00	0.00
5,000.00	14.96	270.00	4,860.92	224.08	0.00	-1,091.67	1,091.67	0.00	0.00	0.00
5,100.00	14.96	270.00	4,957.53	127.47	0.00	-1,117.49	1,117.49	0.00	0.00	0.00
5,200.00	14.96	270.00	5,054.14	30.86	0.00	-1,143.31	1,143.31	0.00	0.00	0.00
5,300.00	14.96	270.00	5,150.75	-65.75	0.00	-1,169.13	1,169.13	0.00	0.00	0.00
RICO FM										
5,314.76	14.96	270.00	5,165.00	-80.00	0.00	-1,172.94	1,172.94	0.00	0.00	0.00
5,400.00	14.96	270.00	5,247.35	-162.35	0.00	-1,194.95	1,194.95	0.00	0.00	0.00
HONAKER TRAIL FM										
5,490.72	14.96	270.00	5,335.00	-250.00	0.00	-1,218.38	1,218.38	0.00	0.00	0.00
5,500.00	14.96	270.00	5,343.96	-258.96	0.00	-1,220.77	1,220.77	0.00	0.00	0.00
5,600.00	14.96	270.00	5,440.57	-355.57	0.00	-1,246.59	1,246.59	0.00	0.00	0.00
5,700.00	14.96	270.00	5,537.18	-452.18	0.00	-1,272.41	1,272.41	0.00	0.00	0.00
5,800.00	14.96	270.00	5,633.79	-548.79	0.00	-1,298.23	1,298.23	0.00	0.00	0.00
5,900.00	14.96	270.00	5,730.40	-645.40	0.00	-1,324.05	1,324.05	0.00	0.00	0.00
6,000.00	14.96	270.00	5,827.01	-742.01	0.00	-1,349.87	1,349.87	0.00	0.00	0.00
6,100.00	14.96	270.00	5,923.62	-838.62	0.00	-1,375.69	1,375.69	0.00	0.00	0.00
6,200.00	14.96	270.00	6,020.23	-935.23	0.00	-1,401.51	1,401.51	0.00	0.00	0.00
ISMAY MBR										
6,204.94	14.96	270.00	6,025.00	-940.00	0.00	-1,402.79	1,402.79	0.00	0.00	0.00
6,300.00	14.96	270.00	6,116.84	-1,031.84	0.00	-1,427.33	1,427.33	0.00	0.00	0.00
DESERT CREEK MBR										
6,370.56	14.96	270.00	6,185.00	-1,100.00	0.00	-1,445.55	1,445.55	0.00	0.00	0.00
AKAH MBR										
6,396.43	14.96	270.00	6,210.00	-1,125.00	0.00	-1,452.23	1,452.23	0.00	0.00	0.00
6,400.00	14.96	270.00	6,213.45	-1,128.45	0.00	-1,453.15	1,453.15	0.00	0.00	0.00
6,500.00	14.96	270.00	6,310.06	-1,225.06	0.00	-1,478.97	1,478.97	0.00	0.00	0.00
6,600.00	14.96	270.00	6,406.66	-1,321.66	0.00	-1,504.79	1,504.79	0.00	0.00	0.00
BARKER CREEK MBR										
6,696.61	14.96	270.00	6,500.00	-1,415.00	0.00	-1,529.73	1,529.73	0.00	0.00	0.00
6,700.00	14.96	270.00	6,503.27	-1,418.27	0.00	-1,530.61	1,530.61	0.00	0.00	0.00
6,800.00	14.96	270.00	6,599.88	-1,514.88	0.00	-1,556.43	1,556.43	0.00	0.00	0.00
PINKERTON TRAIL FM										
6,870.51	14.96	270.00	6,668.00	-1,583.00	0.00	-1,574.63	1,574.63	0.00	0.00	0.00
6,900.00	14.96	270.00	6,696.49	-1,611.49	0.00	-1,582.25	1,582.25	0.00	0.00	0.00
7,000.00	14.96	270.00	6,793.10	-1,708.10	0.00	-1,608.07	1,608.07	0.00	0.00	0.00
MOLAS FM										
7,000.93	14.96	270.00	6,794.00	-1,709.00	0.00	-1,608.31	1,608.31	0.00	0.00	0.00

Planning Report



Database:	Database 1	Local Co-ordinate Reference:	Well HOGBACK DEEP 12-40
Company:	VISION ENERGY GROUP	TVD Reference:	KBE @ 5085.00usft
Project:	SAN JUAN, NEW MEXICO (NAD 83)	MD Reference:	KBE @ 5085.00usft
Site:	NW NW SEC. 20 T29N R16W	North Reference:	True
Well:	HOGBACK DEEP 12-40	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #2		

Planned Survey										
MD (usft)	Inc (°)	Azi (°)	TVD (usft)	SS (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
7,100.00	14.96	270.00	6,889.71	-1,804.71	0.00	-1,633.89	1,633.89	0.00	0.00	0.00
LEADVILLE LS FM										
7,122.04	14.96	270.00	6,911.00	-1,826.00	0.00	-1,639.58	1,639.58	0.00	0.00	0.00
TARGET										
7,162.40	14.96	270.00	6,950.00	-1,865.00	0.00	-1,650.00	1,650.00	0.00	0.00	0.00
7,200.00	14.96	270.00	6,986.32	-1,901.32	0.00	-1,659.71	1,659.71	0.00	0.00	0.00
PROPOSED TD										
7,281.44	14.96	270.00	7,065.00	-1,980.00	0.00	-1,680.73	1,680.73	0.00	0.00	0.00

Formations					
MD (usft)	TVD (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
776.08	775.00	DAKOTA		0.00	
989.14	985.00	MORRISON		0.00	
2,080.07	2,040.00	TODLITO		0.00	
2,110.09	2,069.00	ENTRADA		0.00	
2,820.17	2,755.00	CHINLE FM		0.00	
3,722.77	3,627.00	SHINARUMP MBR		0.00	
3,831.46	3,732.00	DECHELLY SS MBR		0.00	
4,080.92	3,973.00	CUTLER		0.00	
5,314.76	5,165.00	RICO FM		0.00	
5,490.72	5,335.00	HONAKER TRAIL FM		0.00	
6,204.94	6,025.00	ISMAY MBR		0.00	
6,370.56	6,185.00	DESERT CREEK MBR		0.00	
6,396.43	6,210.00	AKAH MBR		0.00	
6,696.61	6,500.00	BARKER CREEK MBR		0.00	
6,870.51	6,668.00	PINKERTON TRAIL FM		0.00	
7,000.93	6,794.00	MOLAS FM		0.00	
7,122.04	6,911.00	LEADVILLE LS FM		0.00	
7,281.44	7,065.00	OURAY LS FM		0.00	

Plan Annotations				
MD (usft)	TVD (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
400.00	400.00	0.00	0.00	KOP (2°/100ft)
1,148.16	1,139.68	0.00	-97.14	EOB TO 14.96° INC
7,162.40	6,950.00	0.00	-1,650.00	TARGET
7,281.44	7,065.00	0.00	-1,680.73	PROPOSED TD

VISION ENERGY GROUP

SAN JUAN, NEW MEXICO (NAD 83)

NW NW SEC. 20 T29N R16W

HOGBACK DEEP 12-40

ORIGINAL WELLBORE

PROPOSAL #2

Anticollision Report

16 February, 2022



Anticollision Report



Company:	VISION ENERGY GROUP	Local Co-ordinate Reference:	Well HOGBACK DEEP 12-40
Project:	SAN JUAN, NEW MEXICO (NAD 83)	TVD Reference:	KBE @ 5085.00usft
Reference Site:	NW NW SEC. 20 T29N R16W	MD Reference:	KBE @ 5085.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	HOGBACK DEEP 12-40	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Reference	PROPOSAL #2		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD + Stations Interval 100.00usft	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum centre distance of 3,280.83usft	Error Surface:	Pedal Curve
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program	Date	2022-02-16		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	7,281.44	PROPOSAL #2 (ORIGINAL WELLBORE)	OWSG (Rev2) MWD	OWSG MWD - Standard

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
NW NW SEC. 20 T29N R16W						
EXIST VERT NAVAJO 18 #007 - Wellbore #1 - Design #1	1,023.55	840.00	1,331.12	1,311.44	67.634	CC, ES
EXIST VERT NAVAJO 18 #007 - Wellbore #1 - Design #1	1,100.00	840.00	1,332.38	1,312.64	67.483	SF
EXIST VERT NAVAJO 18 #011 - Wellbore #1 - Design #1	1,126.23	837.00	1,469.47	1,449.69	74.268	CC, ES
EXIST VERT NAVAJO 18 #011 - Wellbore #1 - Design #1	1,200.00	837.00	1,470.86	1,451.03	74.188	SF
HOGBACK DEEP 12-42 - ORIGINAL WELLBORE - PRO	1,501.27	1,473.82	729.45	723.42	121.021	CC
HOGBACK DEEP 12-42 - ORIGINAL WELLBORE - PRO	1,600.00	1,569.20	729.90	723.34	111.322	ES
HOGBACK DEEP 12-42 - ORIGINAL WELLBORE - PRO	7,281.44	7,276.93	2,134.96	2,098.74	58.942	SF

Offset Design: NW NW SEC. 20 T29N R16W - EXIST VERT NAVAJO 18 #007 - Wellbore #1 - Design #1												Offset Site Error:	0.00 usft
Survey Program:		0-INC					Rule Assigned:				Offset Well Error:	0.00 usft	
Reference	Offset	Semi Major Axis		Offset Wellbore Centre		Distance				Warning			
Measured	Vertical	Measured	Vertical	Reference	Offset	Highside		Between	Between		Minimum	Separation	
Depth (usft)	Depth (usft)	Depth (usft)	Depth (usft)	(usft)	(usft)	Toolface (°)	+N/-S (usft)	+E/-W (usft)	Centres (usft)		Ellipses (usft)	Separation (usft)	Factor
0.00	0.00	83.00	83.00	0.00	1.07	-66.21	551.27	-1,250.61	1,366.72				
100.00	100.00	183.00	183.00	0.15	3.18	-66.21	551.27	-1,250.61	1,366.72	1,363.39	3.32	411.179	
200.00	200.00	283.00	283.00	0.51	5.28	-66.21	551.27	-1,250.61	1,366.72	1,360.92	5.79	235.980	
300.00	300.00	383.00	383.00	0.87	7.33	-66.21	551.27	-1,250.61	1,366.72	1,358.52	8.20	166.719	
400.00	400.00	483.00	483.00	1.22	9.36	-66.21	551.27	-1,250.61	1,366.72	1,356.13	10.59	129.091	
500.00	499.98	582.98	582.98	1.58	11.39	23.83	551.27	-1,250.61	1,365.12	1,352.16	12.96	105.320	
600.00	599.84	682.84	682.84	1.93	13.40	23.96	551.27	-1,250.61	1,360.33	1,345.00	15.33	88.738	
700.00	699.45	782.45	782.45	2.29	15.41	24.17	551.27	-1,250.61	1,352.37	1,334.67	17.70	76.417	
800.00	798.70	840.00	840.00	2.67	16.55	24.38	551.27	-1,250.61	1,341.90	1,322.71	19.19	69.937	
900.00	897.47	840.00	840.00	3.07	16.55	24.44	551.27	-1,250.61	1,334.42	1,314.96	19.46	68.563	
1,000.00	995.62	840.00	840.00	3.50	16.55	24.46	551.27	-1,250.61	1,331.24	1,311.59	19.65	67.752	
1,023.55	1,018.64	840.00	840.00	3.60	16.55	24.47	551.27	-1,250.61	1,331.12	1,311.44	19.68	67.634	CC, ES
1,100.00	1,093.06	840.00	840.00	3.96	16.55	24.45	551.27	-1,250.61	1,332.38	1,312.64	19.74	67.483	SF
1,148.16	1,139.68	840.00	840.00	4.19	16.55	24.44	551.27	-1,250.61	1,334.48	1,314.72	19.76	67.544	
1,200.00	1,189.77	840.00	840.00	4.45	16.55	24.44	551.27	-1,250.61	1,338.27	1,318.52	19.75	67.764	
1,300.00	1,286.38	840.00	840.00	4.96	16.55	24.44	551.27	-1,250.61	1,351.19	1,331.52	19.67	68.702	
1,400.00	1,382.99	840.00	840.00	5.49	16.55	24.44	551.27	-1,250.61	1,371.30	1,351.80	19.50	70.317	
1,500.00	1,479.59	840.00	840.00	6.02	16.55	24.44	551.27	-1,250.61	1,398.29	1,379.03	19.26	72.599	
1,600.00	1,576.20	840.00	840.00	6.56	16.55	24.44	551.27	-1,250.61	1,431.77	1,412.81	18.96	75.531	
1,700.00	1,672.81	840.00	840.00	7.10	16.55	24.44	551.27	-1,250.61	1,471.29	1,452.69	18.60	79.093	
1,800.00	1,769.42	840.00	840.00	7.65	16.55	24.44	551.27	-1,250.61	1,516.39	1,498.18	18.21	83.264	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	VISION ENERGY GROUP	Local Co-ordinate Reference:	Well HOGBACK DEEP 12-40
Project:	SAN JUAN, NEW MEXICO (NAD 83)	TVD Reference:	KBE @ 5085.00usft
Reference Site:	NW NW SEC. 20 T29N R16W	MD Reference:	KBE @ 5085.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	HOGBACK DEEP 12-40	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design: NW NW SEC. 20 T29N R16W - EXIST VERT NAVAJO 18 #007 - Wellbore #1 - Design #1												Offset Site Error:	0.00 usft
Survey Program: 0-INC												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)		
1,900.00	1,866.03	840.00	840.00	8.20	16.55	24.44	551.27	-1,250.61	1,566.58	1,548.79	17.80	88.019	
2,000.00	1,962.64	840.00	840.00	8.75	16.55	24.44	551.27	-1,250.61	1,621.40	1,604.03	17.37	93.329	
2,100.00	2,059.25	840.00	840.00	9.31	16.55	24.44	551.27	-1,250.61	1,680.38	1,663.44	16.95	99.165	
2,200.00	2,155.86	840.00	840.00	9.87	16.55	24.44	551.27	-1,250.61	1,743.11	1,726.58	16.52	105.496	
2,300.00	2,252.47	840.00	840.00	10.42	16.55	24.44	551.27	-1,250.61	1,809.19	1,793.08	16.11	112.289	
2,400.00	2,349.08	840.00	840.00	10.98	16.55	24.44	551.27	-1,250.61	1,878.27	1,862.56	15.72	119.507	
2,500.00	2,445.69	840.00	840.00	11.54	16.55	24.44	551.27	-1,250.61	1,950.04	1,934.70	15.34	127.115	
2,600.00	2,542.30	840.00	840.00	12.10	16.55	24.44	551.27	-1,250.61	2,024.20	2,009.22	14.99	135.074	
2,700.00	2,638.91	840.00	840.00	12.66	16.55	24.44	551.27	-1,250.61	2,100.51	2,085.86	14.65	143.345	
2,800.00	2,735.51	840.00	840.00	13.23	16.55	24.44	551.27	-1,250.61	2,178.74	2,164.39	14.34	151.890	
2,900.00	2,832.12	840.00	840.00	13.79	16.55	24.44	551.27	-1,250.61	2,258.68	2,244.62	14.06	160.665	
3,000.00	2,928.73	840.00	840.00	14.35	16.55	24.44	551.27	-1,250.61	2,340.17	2,326.37	13.80	169.632	
3,100.00	3,025.34	840.00	840.00	14.92	16.55	24.44	551.27	-1,250.61	2,423.04	2,409.49	13.56	178.748	
3,200.00	3,121.95	840.00	840.00	15.48	16.55	24.44	551.27	-1,250.61	2,507.17	2,493.83	13.34	187.973	
3,300.00	3,218.56	840.00	840.00	16.05	16.55	24.44	551.27	-1,250.61	2,592.42	2,579.27	13.14	197.266	
3,400.00	3,315.17	840.00	840.00	16.61	16.55	24.44	551.27	-1,250.61	2,678.69	2,665.72	12.97	206.588	
3,500.00	3,411.78	840.00	840.00	17.18	16.55	24.44	551.27	-1,250.61	2,765.88	2,753.07	12.81	215.900	
3,600.00	3,508.39	840.00	840.00	17.74	16.55	24.44	551.27	-1,250.61	2,853.92	2,841.24	12.67	225.165	
3,700.00	3,605.00	840.00	840.00	18.31	16.55	24.44	551.27	-1,250.61	2,942.72	2,930.16	12.56	234.348	
3,800.00	3,701.61	840.00	840.00	18.87	16.55	24.44	551.27	-1,250.61	3,032.22	3,019.76	12.46	243.415	
3,900.00	3,798.22	840.00	840.00	19.44	16.55	24.44	551.27	-1,250.61	3,122.35	3,109.98	12.37	252.336	
4,000.00	3,894.83	840.00	840.00	20.01	16.55	24.44	551.27	-1,250.61	3,213.07	3,200.77	12.31	261.082	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	VISION ENERGY GROUP	Local Co-ordinate Reference:	Well HOGBACK DEEP 12-40
Project:	SAN JUAN, NEW MEXICO (NAD 83)	TVD Reference:	KBE @ 5085.00usft
Reference Site:	NW NW SEC. 20 T29N R16W	MD Reference:	KBE @ 5085.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	HOGBACK DEEP 12-40	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design: NW NW SEC. 20 T29N R16W - EXIST VERT NAVAJO 18 #011 - Wellbore #1 - Design #1												Offset Site Error:	0.00 usft
Survey Program: 0-INC												Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	75.00	75.00	0.00	0.95	-75.74	372.88	-1,467.51	1,514.14				
100.00	100.00	175.00	175.00	0.15	2.97	-75.74	372.88	-1,467.51	1,514.14	1,511.02	3.12	485.310	
200.00	200.00	275.00	275.00	0.51	5.10	-75.74	372.88	-1,467.51	1,514.14	1,508.53	5.60	270.141	
300.00	300.00	375.00	375.00	0.87	7.15	-75.74	372.88	-1,467.51	1,514.14	1,506.13	8.01	188.934	
400.00	400.00	475.00	475.00	1.22	9.18	-75.74	372.88	-1,467.51	1,514.14	1,503.73	10.40	145.524	
500.00	499.98	574.98	574.98	1.58	11.20	14.28	372.88	-1,467.51	1,512.45	1,499.67	12.78	118.348	
600.00	599.84	674.84	674.84	1.93	13.22	14.36	372.88	-1,467.51	1,507.38	1,492.23	15.15	99.510	
700.00	699.45	774.45	774.45	2.29	15.23	14.48	372.88	-1,467.51	1,498.93	1,481.42	17.51	85.581	
800.00	798.70	837.00	837.00	2.67	16.47	14.61	372.88	-1,467.51	1,487.59	1,468.48	19.11	77.853	
900.00	897.47	837.00	837.00	3.07	16.47	14.66	372.88	-1,467.51	1,478.22	1,458.82	19.40	76.200	
1,000.00	995.62	837.00	837.00	3.50	16.47	14.69	372.88	-1,467.51	1,472.20	1,452.58	19.62	75.045	
1,100.00	1,093.06	837.00	837.00	3.96	16.47	14.70	372.88	-1,467.51	1,469.59	1,449.83	19.76	74.371	
1,126.23	1,118.47	837.00	837.00	4.08	16.47	14.70	372.88	-1,467.51	1,469.47	1,449.69	19.79	74.268	CC, ES
1,148.16	1,139.68	837.00	837.00	4.19	16.47	14.70	372.88	-1,467.51	1,469.56	1,449.75	19.80	74.214	
1,200.00	1,189.77	837.00	837.00	4.45	16.47	14.70	372.88	-1,467.51	1,470.86	1,451.03	19.83	74.188	SF
1,300.00	1,286.38	837.00	837.00	4.96	16.47	14.70	372.88	-1,467.51	1,478.51	1,458.70	19.82	74.611	
1,400.00	1,382.99	837.00	837.00	5.49	16.47	14.70	372.88	-1,467.51	1,492.84	1,473.11	19.73	75.658	
1,500.00	1,479.59	837.00	837.00	6.02	16.47	14.70	372.88	-1,467.51	1,513.66	1,494.08	19.58	77.322	
1,600.00	1,576.20	837.00	837.00	6.56	16.47	14.70	372.88	-1,467.51	1,540.70	1,521.34	19.36	79.590	
1,700.00	1,672.81	837.00	837.00	7.10	16.47	14.70	372.88	-1,467.51	1,573.63	1,554.55	19.09	82.449	
1,800.00	1,769.42	837.00	837.00	7.65	16.47	14.70	372.88	-1,467.51	1,612.11	1,593.34	18.77	85.884	
1,900.00	1,866.03	837.00	837.00	8.20	16.47	14.70	372.88	-1,467.51	1,655.74	1,637.32	18.42	89.875	
2,000.00	1,962.64	837.00	837.00	8.75	16.47	14.70	372.88	-1,467.51	1,704.13	1,686.08	18.05	94.402	
2,100.00	2,059.25	837.00	837.00	9.31	16.47	14.70	372.88	-1,467.51	1,756.88	1,739.22	17.67	99.444	
2,200.00	2,155.86	837.00	837.00	9.87	16.47	14.70	372.88	-1,467.51	1,813.62	1,796.34	17.28	104.975	
2,300.00	2,252.47	837.00	837.00	10.42	16.47	14.70	372.88	-1,467.51	1,873.98	1,857.09	16.89	110.971	
2,400.00	2,349.08	837.00	837.00	10.98	16.47	14.70	372.88	-1,467.51	1,937.62	1,921.12	16.50	117.404	
2,500.00	2,445.69	837.00	837.00	11.54	16.47	14.70	372.88	-1,467.51	2,004.23	1,988.10	16.13	124.246	
2,600.00	2,542.30	837.00	837.00	12.10	16.47	14.70	372.88	-1,467.51	2,073.53	2,057.76	15.77	131.467	
2,700.00	2,638.91	837.00	837.00	12.66	16.47	14.70	372.88	-1,467.51	2,145.25	2,129.82	15.43	139.036	
2,800.00	2,735.51	837.00	837.00	13.23	16.47	14.70	372.88	-1,467.51	2,219.16	2,204.06	15.10	146.921	
2,900.00	2,832.12	837.00	837.00	13.79	16.47	14.70	372.88	-1,467.51	2,295.05	2,280.25	14.80	155.088	
3,000.00	2,928.73	837.00	837.00	14.35	16.47	14.70	372.88	-1,467.51	2,372.73	2,358.22	14.51	163.503	
3,100.00	3,025.34	837.00	837.00	14.92	16.47	14.70	372.88	-1,467.51	2,452.02	2,437.78	14.25	172.131	
3,200.00	3,121.95	837.00	837.00	15.48	16.47	14.70	372.88	-1,467.51	2,532.79	2,518.79	14.00	180.936	
3,300.00	3,218.56	837.00	837.00	16.05	16.47	14.70	372.88	-1,467.51	2,614.88	2,601.11	13.77	189.884	
3,400.00	3,315.17	837.00	837.00	16.61	16.47	14.70	372.88	-1,467.51	2,698.18	2,684.61	13.56	198.937	
3,500.00	3,411.78	837.00	837.00	17.18	16.47	14.70	372.88	-1,467.51	2,782.58	2,769.20	13.37	208.060	
3,600.00	3,508.39	837.00	837.00	17.74	16.47	14.70	372.88	-1,467.51	2,867.98	2,854.78	13.20	217.218	
3,700.00	3,605.00	837.00	837.00	18.31	16.47	14.70	372.88	-1,467.51	2,954.30	2,941.25	13.05	226.375	
3,800.00	3,701.61	837.00	837.00	18.87	16.47	14.70	372.88	-1,467.51	3,041.46	3,028.54	12.91	235.499	
3,900.00	3,798.22	837.00	837.00	19.44	16.47	14.70	372.88	-1,467.51	3,129.39	3,116.59	12.80	244.555	
4,000.00	3,894.83	837.00	837.00	20.01	16.47	14.70	372.88	-1,467.51	3,218.02	3,205.32	12.69	253.512	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	VISION ENERGY GROUP	Local Co-ordinate Reference:	Well HOGBACK DEEP 12-40
Project:	SAN JUAN, NEW MEXICO (NAD 83)	TVD Reference:	KBE @ 5085.00usft
Reference Site:	NW NW SEC. 20 T29N R16W	MD Reference:	KBE @ 5085.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	HOGBACK DEEP 12-40	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design: NW NW SEC. 20 T29N R16W - HOGBACK DEEP 12-42 - ORIGINAL WELLBORE - PROPOSAL #3												Offset Site Error:	0.00 usft
Survey Program: 0-												Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	-14.48	729.45	-188.31	753.40	753.22	0.15	5,057.785	
100.00	100.00	93.00	93.00	0.15	0.00	-14.48	729.45	-188.31	753.37	752.86	0.51	1,484.649	
200.00	200.00	193.00	193.00	0.51	0.00	-14.48	729.45	-188.31	753.37	752.50	0.87	870.030	
300.00	300.00	293.00	293.00	1.22	0.00	-14.48	729.45	-188.31	753.37	752.14	1.22	615.304	
400.00	400.00	393.00	393.00	1.58	0.00	75.66	729.45	-188.31	752.93	751.36	1.58	477.941	
500.00	499.98	492.98	492.98	1.93	0.00	76.07	729.45	-188.31	751.65	749.73	1.93	390.212	
600.00	599.84	592.84	592.84	2.29	0.00	76.76	729.45	-188.31	749.60	747.31	2.29	327.492	
700.00	699.45	692.45	692.45	2.67	0.00	77.71	729.45	-188.31	746.89	744.22	2.67	280.005	
800.00	798.70	791.70	791.70	3.07	0.00	78.94	729.45	-188.31	743.68	740.62	3.07	242.470	
900.00	897.47	890.47	890.47	3.50	0.00	80.43	729.45	-188.31	740.20	736.71	3.49	211.850	
1,000.00	995.62	988.62	988.62	3.96	0.00	82.18	729.45	-188.31	736.72	732.76	3.95	186.314	
1,100.00	1,093.06	1,086.06	1,086.06	4.19	0.00	83.11	729.45	-188.31	735.13	730.94	4.19	175.497	
1,148.16	1,139.68	1,132.68	1,132.68	4.45	0.00	84.12	729.45	-188.31	733.59	729.14	4.45	164.890	
1,200.00	1,189.77	1,182.77	1,182.77	4.96	0.00	86.06	729.45	-188.31	731.30	726.34	4.96	147.341	
1,300.00	1,286.38	1,279.38	1,279.38	5.49	0.00	88.02	729.45	-188.31	729.92	724.43	5.49	132.990	
1,400.00	1,382.99	1,375.99	1,375.99	6.02	0.00	89.98	729.45	-188.31	729.45	723.43	6.02	121.159	
1,500.00	1,479.59	1,472.59	1,472.59	6.03	0.00	90.00	729.45	-188.31	729.45	723.42	6.03	121.021 CC	
1,501.27	1,480.82	1,473.82	1,473.82	6.56	0.00	91.93	729.45	-188.31	729.90	723.34	6.56	111.322 ES	
1,600.00	1,576.20	1,569.20	1,569.20	7.10	0.00	93.89	729.45	-188.31	731.25	724.16	7.09	103.081	
1,700.00	1,672.81	1,665.81	1,665.81	7.65	0.00	95.83	729.45	-188.31	733.52	725.89	7.63	96.128	
1,800.00	1,769.42	1,762.42	1,762.42	8.20	0.00	97.76	729.45	-188.31	736.68	728.52	8.16	90.225	
1,866.03	1,859.03	1,852.03	1,852.03	8.75	0.00	99.68	729.45	-188.31	740.73	732.03	8.70	85.187	
2,000.00	1,962.64	1,955.64	1,955.64	9.31	0.00	101.57	729.45	-188.31	745.65	736.43	9.22	80.867	
2,100.00	2,059.25	2,052.25	2,052.25	9.87	0.00	103.26	729.71	-188.42	751.71	741.97	9.74	77.196	
2,200.00	2,155.86	2,148.86	2,148.86	10.42	0.00	104.69	731.79	-189.27	760.45	750.21	10.24	74.247	
2,300.00	2,252.47	2,245.47	2,245.47	10.98	0.00	105.98	735.91	-190.96	771.99	761.25	10.74	71.908	
2,400.00	2,349.08	2,342.08	2,342.08	11.54	0.00	107.15	742.19	-193.54	786.17	774.94	11.22	70.062	
2,500.00	2,445.69	2,438.69	2,438.69	12.10	0.00	108.18	750.52	-196.95	802.82	791.13	11.70	68.634	
2,600.00	2,542.30	2,535.30	2,535.30	12.66	0.00	109.06	760.90	-201.21	821.82	809.66	12.17	67.552	
2,700.00	2,638.91	2,631.91	2,631.91	13.23	0.00	109.79	773.30	-206.30	843.03	830.41	12.63	66.759	
2,800.00	2,735.51	2,728.51	2,728.51	13.79	0.00	110.38	787.37	-212.07	866.35	853.27	13.08	66.235	
2,900.00	2,832.12	2,825.12	2,825.12	14.35	0.00	110.86	803.93	-218.86	891.66	878.12	13.54	65.876	
3,000.00	2,928.73	2,921.73	2,921.73	14.92	0.00	111.20	822.02	-226.28	918.90	904.92	13.98	65.722	
3,100.00	3,025.34	3,018.34	3,018.34	15.48	0.00	111.42	841.85	-234.42	948.00	933.57	14.42	65.729	
3,200.00	3,121.95	3,114.95	3,114.95	16.05	0.00	111.54	863.32	-243.22	978.89	964.04	14.86	65.880	
3,300.00	3,218.56	3,211.56	3,211.56	16.61	0.00	111.56	889.30	-253.88	1,011.61	996.27	15.33	65.978	
3,400.00	3,315.17	3,308.17	3,308.17	17.18	0.00	111.50	910.77	-262.69	1,045.93	1,030.22	15.71	66.563	
3,500.00	3,411.78	3,404.78	3,404.78	17.74	0.00	111.36	936.74	-273.34	1,082.01	1,065.87	16.13	67.063	
3,600.00	3,508.39	3,501.39	3,501.39	18.31	0.00	111.15	969.77	-286.89	1,118.94	1,102.30	16.65	67.220	
3,700.00	3,605.00	3,598.00	3,598.00	18.87	0.00	110.95	1,003.08	-300.55	1,155.89	1,138.73	17.16	67.350	
3,800.00	3,701.61	3,694.61	3,694.61	19.44	0.00	110.76	1,036.38	-314.21	1,192.85	1,175.17	17.68	67.472	
3,900.00	3,798.22	3,791.22	3,791.22	20.01	0.00	110.59	1,069.68	-327.87	1,229.82	1,211.62	18.20	67.586	
4,000.00	3,894.83	3,887.83	3,887.83	20.57	0.00	110.42	1,102.99	-341.53	1,266.79	1,248.08	18.71	67.694	
4,100.00	3,991.43	3,984.43	3,984.43	21.14	0.00	110.27	1,136.29	-355.19	1,303.78	1,284.55	19.23	67.795	
4,200.00	4,088.04	4,081.04	4,081.04	21.71	0.00	110.12	1,169.60	-368.85	1,340.78	1,321.03	19.75	67.890	
4,300.00	4,184.65	4,177.65	4,177.65	22.27	0.00	109.98	1,202.90	-382.51	1,377.78	1,357.51	20.27	67.980	
4,400.00	4,281.26	4,274.26	4,274.26	22.84	0.00	109.85	1,236.21	-396.17	1,414.79	1,394.00	20.79	68.064	
4,500.00	4,377.87	4,370.87	4,370.87	23.41	0.00	109.73	1,269.51	-409.83	1,451.80	1,430.49	21.30	68.145	
4,600.00	4,474.48	4,467.48	4,467.48	23.97	0.00	109.61	1,302.82	-423.49	1,488.82	1,467.00	21.82	68.220	
4,700.00	4,571.09	4,564.09	4,564.09	24.54	0.00	109.50	1,336.12	-437.16	1,525.84	1,503.50	22.34	68.292	
4,800.00	4,667.70	4,660.70	4,660.70	25.11	0.00	109.39	1,369.43	-450.82	1,562.87	1,540.01	22.86	68.361	
4,900.00	4,764.31	4,757.31	4,757.31										

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	VISION ENERGY GROUP	Local Co-ordinate Reference:	Well HOGBACK DEEP 12-40
Project:	SAN JUAN, NEW MEXICO (NAD 83)	TVD Reference:	KBE @ 5085.00usft
Reference Site:	NW NW SEC. 20 T29N R16W	MD Reference:	KBE @ 5085.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	HOGBACK DEEP 12-40	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design: NW NW SEC. 20 T29N R16W - HOGBACK DEEP 12-42 - ORIGINAL WELLBORE - PROPOSAL #3													Offset Site Error: 0.00 usft
Survey Program: 0-													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
5,000.00	4,860.92	4,539.69	4,408.19	25.68	0.00	109.29	1,402.73	-464.48	1,599.91	1,576.53	23.38	68.425	
5,100.00	4,957.53	4,632.54	4,493.78	26.24	0.00	109.19	1,436.04	-478.14	1,636.95	1,613.05	23.90	68.487	
5,200.00	5,054.14	4,725.39	4,579.37	26.81	0.00	109.09	1,469.34	-491.80	1,673.99	1,649.57	24.42	68.545	
5,300.00	5,150.75	4,818.25	4,664.96	27.38	0.00	109.00	1,502.65	-505.46	1,711.04	1,686.09	24.94	68.601	
5,400.00	5,247.35	4,911.10	4,750.55	27.95	0.00	108.92	1,535.95	-519.12	1,748.09	1,722.62	25.46	68.654	
5,500.00	5,343.96	5,003.95	4,836.14	28.52	0.00	108.84	1,569.26	-532.78	1,785.14	1,759.16	25.98	68.705	
5,600.00	5,440.57	5,096.80	4,921.73	29.08	0.00	108.76	1,602.56	-546.44	1,822.20	1,795.69	26.50	68.753	
5,700.00	5,537.18	5,189.65	5,007.32	29.65	0.00	108.68	1,635.87	-560.10	1,859.25	1,832.23	27.02	68.799	
5,800.00	5,633.79	5,289.09	5,099.00	30.22	0.00	108.61	1,671.51	-574.72	1,896.30	1,868.72	27.58	68.757	
5,900.00	5,730.40	5,471.34	5,269.43	30.79	0.00	108.61	1,731.14	-599.18	1,930.90	1,902.37	28.53	67.689	
6,000.00	5,827.01	5,659.13	5,448.97	31.36	0.00	108.88	1,781.97	-620.03	1,961.05	1,931.63	29.42	66.652	
6,100.00	5,923.62	5,851.06	5,635.79	31.92	0.00	109.39	1,822.56	-636.68	1,986.63	1,956.38	30.25	65.669	
6,200.00	6,020.23	6,045.50	5,827.60	32.49	0.00	110.15	1,851.79	-648.67	2,007.57	1,976.57	31.00	64.754	
6,300.00	6,116.84	6,240.68	6,021.87	33.06	0.00	111.14	1,868.96	-655.71	2,023.89	1,992.22	31.67	63.915	
6,400.00	6,213.45	6,425.37	6,206.45	33.63	0.00	112.30	1,873.91	-657.74	2,035.74	2,003.51	32.23	63.164	
6,500.00	6,310.06	6,521.98	6,303.06	34.20	0.00	112.95	1,873.91	-657.74	2,045.96	2,013.27	32.70	62.575	
6,600.00	6,406.67	6,618.59	6,399.67	34.77	0.00	113.59	1,873.91	-657.74	2,056.46	2,023.30	33.16	62.018	
6,700.00	6,503.27	6,715.20	6,496.27	35.33	0.00	114.23	1,873.91	-657.74	2,067.23	2,033.61	33.62	61.491	
6,800.00	6,599.88	6,811.81	6,592.88	35.90	0.00	114.86	1,873.91	-657.74	2,078.26	2,044.19	34.07	60.992	
6,900.00	6,696.49	6,908.42	6,689.49	36.47	0.00	115.48	1,873.91	-657.74	2,089.56	2,055.03	34.53	60.520	
7,000.00	6,793.10	7,005.03	6,786.10	37.04	0.00	116.10	1,873.91	-657.74	2,101.11	2,066.13	34.98	60.073	
7,100.00	6,889.71	7,101.64	6,882.71	37.61	0.00	116.71	1,873.91	-657.74	2,112.91	2,077.49	35.42	59.651	
7,162.41	6,950.00	7,161.93	6,943.00	37.96	0.00	117.09	1,873.91	-657.74	2,120.41	2,084.71	35.70	59.399	
7,200.00	6,986.32	7,198.25	6,979.32	38.18	0.00	117.32	1,873.91	-657.74	2,124.97	2,089.10	35.86	59.251	
7,281.44	7,065.00	7,276.93	7,058.00	38.64	0.00	117.81	1,873.91	-657.74	2,134.96	2,098.74	36.22	58.942 SF	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	VISION ENERGY GROUP	Local Co-ordinate Reference:	Well HOGBACK DEEP 12-40
Project:	SAN JUAN, NEW MEXICO (NAD 83)	TVD Reference:	KBE @ 5085.00usft
Reference Site:	NW NW SEC. 20 T29N R16W	MD Reference:	KBE @ 5085.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	HOGBACK DEEP 12-40	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Reference Depths are relative to KBE @ 5085.00usft

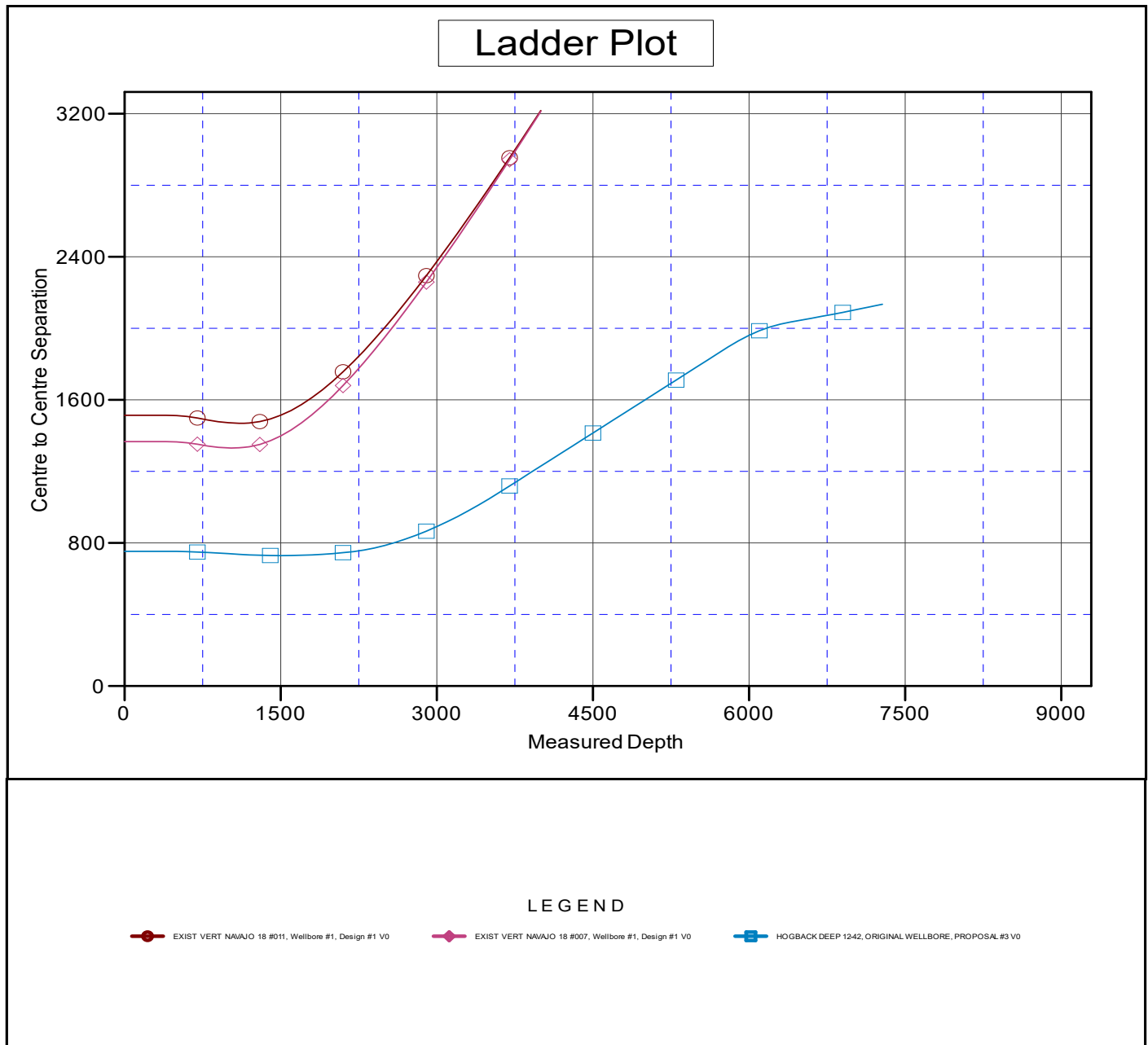
Offset Depths are relative to Offset Datum

Central Meridian is -107.833334

Coordinates are relative to: HOGBACK DEEP 12-40

Coordinate System is US State Plane 1983, New Mexico Western Zone

Grid Convergence at Surface is: -0.43°



CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	VISION ENERGY GROUP	Local Co-ordinate Reference:	Well HOGBACK DEEP 12-40
Project:	SAN JUAN, NEW MEXICO (NAD 83)	TVD Reference:	KBE @ 5085.00usft
Reference Site:	NW NW SEC. 20 T29N R16W	MD Reference:	KBE @ 5085.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	HOGBACK DEEP 12-40	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Reference Depths are relative to KBE @ 5085.00usft

Offset Depths are relative to Offset Datum

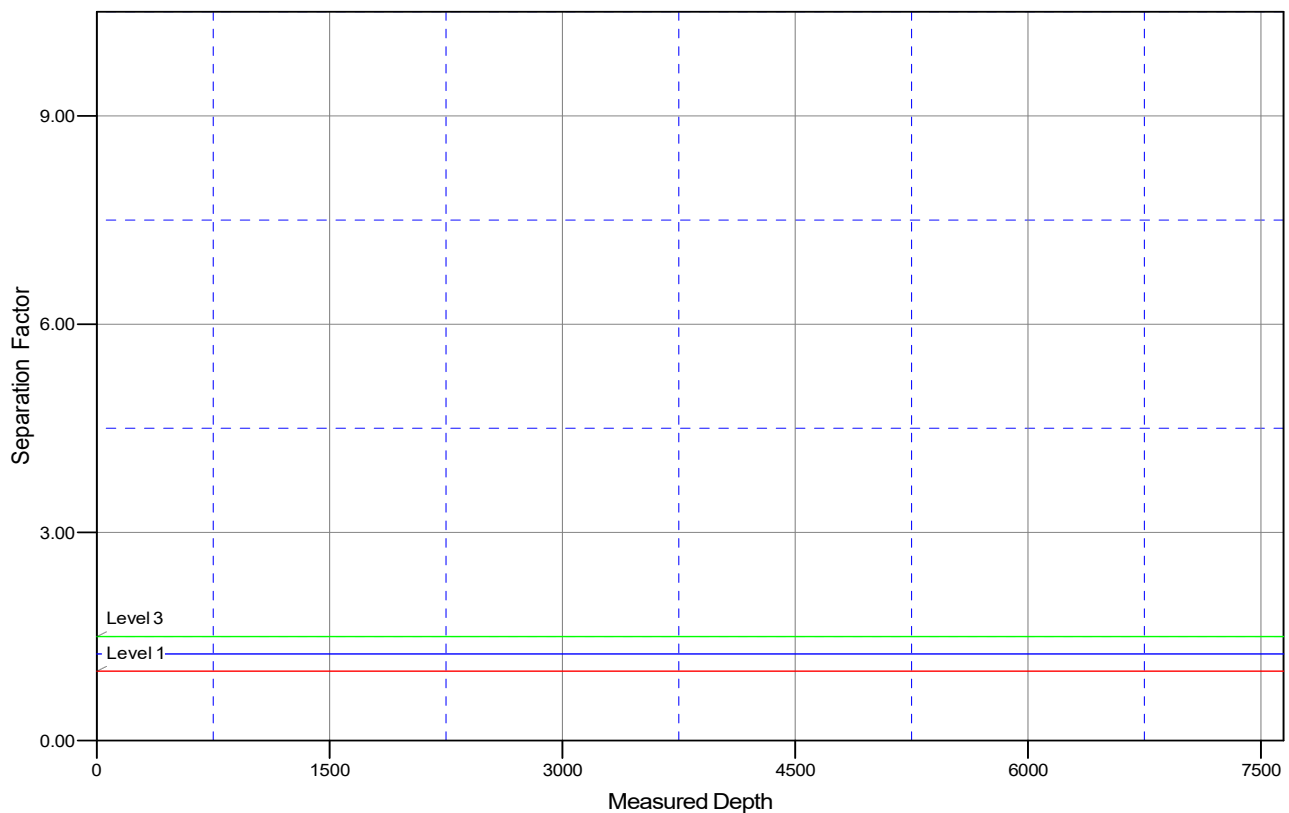
Central Meridian is -107.833334

Coordinates are relative to: HOGBACK DEEP 12-40

Coordinate System is US State Plane 1983, New Mexico Western Zone

Grid Convergence at Surface is: -0.43°

Separation Factor Plot



LEGEND

EXIST VERT NAWAJO 18 #011, Wellbore #1, Design #1 V0

EXIST VERT NAWAJO 18 #007, Wellbore #1, Design #1 V0

HOGBACK DEEP 1242, ORIGINAL WELLBORE, PROPOSAL #3 V0

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

CONDITIONS

Action 85632

CONDITIONS

Operator: VISION ENERGY GROUP LLC 5750 Johnston Street Lafayette, LA 73112	OGRID: 280962
	Action Number: 85632
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
kpickford	Adhere to previous NMOCD Conditions of Approval	3/7/2022