

Well Name: ALLISON UNIT	Well Location: T32N / R7W / SEC 9 / NESE / 36.994746 / -107.565681	County or Parish/State: SAN JUAN / NM
Well Number: 123H	Type of Well: CONVENTIONAL GAS WELL	Allottee or Tribe Name:
Lease Number: NMSF078459B	Unit or CA Name: ALLISON UNIT--FRCL	Unit or CA Number: NMNM78372C
US Well Number: 3004535611	Well Status: Producing Gas Well	Operator: HILCORP ENERGY COMPANY

Notice of Intent

Sundry ID: 2740465

Type of Submission: Notice of Intent Type of Action: Recompletion

Date Sundry Submitted: 07/12/2023 Time Sundry Submitted: 06:40

Date proposed operation will begin: 08/01/2023

Procedure Description: Hilcorp Energy Company requests permission to drill a lateral sidetrack to add pay in the existing Fruitland Coal. Please see the attached procedure, current and proposed wellbore diagram, plat, natural gas management plan, directional and anti-collision plans. A closed loop system will be used. A pre-reclamation site visit was held on 5/22/2023 with Roger Herrera/BLM/ The reclamation plan is attached.

Surface Disturbance

Is any additional surface disturbance proposed?: No

NOI Attachments

Procedure Description

Allison_123H_Sidetrack_NOI_20230712063911.pdf

Notify NMOCD 24 Hours Prior to beginning operations

NSP-2108 will need to be amended

Once work is conducted, submit a C-104 Packet with the C-103T and amended C-102, C-104, and C-105

Dean R McClure

08/17/2023

Received by OCD: 7/12/2023 1:52:24 PM

Page 2 of 49

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Conditions of Approval

Specialist Review

2740465_SIDETRACK_ALLISON_UNIT_123H_KR_07122023_20230712124202.pdf

Operator

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

Operator Electronic Signature: AMANDA WALKER

Signed on: JUL 12, 2023 06:40 AM

Name: HILCORP ENERGY COMPANY

Title: Operations/Regulatory Technician

Street Address: 1111 TRAVIS ST.

City: HOUSTONState: TX

Phone: (346) 237-2177

Email address: mwalker@hilcorp.com

Field

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: 07/12/2023

Signature: Kenneth Rennick



San Juan County, New Mexico

Allison #123H Sidetrack

Hilcorp Energy Company

Technical Drilling Plan (Rev. 0)

Hilcorp Energy Company proposes to drill and complete the referenced horizontal well sidetrack targeting a coal seam in the Fruitland formation.

Note: This technical drilling plan will be adjusted based upon actual conditions.

1. Location

Date:	June 29, 2023	Pool:	Basin Fruitland Coal
Well Name:	Allison #123H	Ground Elevation (ft. MSL):	6,629'
API	30-045-35611		
Surface Hole Location:	36.994746° N, -107.565681° W NAD 83	Total Measured Depth (ft.)	9,574'
Bottom Hole Location:	36.998283° N, -107.542423° W NAD 83	County, State:	San Juan County, NM

Note: All depths in the directional drilling plan are referenced from an estimated RKB datum of 17' above ground level.

2. Geological Markers

Anticipated formation tops with comments of any possible water, gas or oil shows are indicated below:

Formation	Depth (ft. TVD)	Remarks
Ojo Alamo	2,366'	Water (fresh/useable)
Kirtland	2,468'	None
Fruitland	2,880'	Gas, Water

3. Pressure Control Equipment

See attached BOP equipment and choke manifold schematics for a diagram of pressure control equipment.

- BOP equipment will be nipped up on top of the wellhead after surface casing is set and cemented.
- Pressure control configurations will be designed to meet the minimum 2M standards.
- All equipment will have a minimum of 3M pressure rating and will be rated for 5,000' (TVD).
- A rotating head will be installed on top of the annular as seen in the attached diagram.
- BOP Testing: The BOPE will be tested to 250 psi (Low) for 5 minutes and 3,000 psi (High) for 10 minutes. Utilize a BOPE Testing Unit with a recording chart and appropriate test plug for testing. BOP equipment will be tested upon installation, every 30 days, and after any repairs are made to the BOP equipment. Annular preventors will be functionally tested at least once per week. Pipe and blind rams will be function tested each trip. The New Mexico Oil & Gas Conservation Division and the BLM will be notified 24 hours in advance of testing BOPE. All tests and inspections will be recorded and logged with time and results.

4. Casing & Cement Program



San Juan County, New Mexico

Allison #123H Sidetrack

Hilcorp Energy Company

1. Proposed/Current Casing Program:

Proposed Casing Design					
Casing String	Hole Size	Casing Size	Weight/Grade	Top Depth (MD/TVD)	Shoe Depth (MD/TVD)
Surface (current)	12-1/4"	9-5/8"	32.3# H40 STC	0'	516' / 516'
Intermediate (current)	8-3/4"	7"	23# J55 LTC	0'	3,899' / 3,363'
Production Liner (pre-perforated)	6-1/4"	4-1/2"	11.6# J55 (or equiv.) LTC. Pre perforated.	3,073' / 2,949'	9,574' / 3,130'
Proposed Casing Design Safety Factors					
Casing String	Casing Description		Burst Design SF	Collapse Design SF	Joint Tensile Design SF
Production Liner (pre-perforated)	4-1/2" 11.6# J55 LTC		N/A	N/A	1.9
					1.7

Notes:

- The production liner will be pre-perforated and dropped off in the open hole (uncemented). The top of the production liner will be approximately 5'-10' outside of the casing exit (no overlap between liner and 7" casing).
- If the 6-1/4" hole is not drilled to the total planned measured depth, the production liner setting depth and length will be adjusted accordingly.

2. Proposed Centralizer Program:

Proposed Centralizer Program	
Interval	Centralizers & Placement
Production	N/A

3. Proposed Cement Program:

Proposed Cement Design							
Interval	Depth (ft. MD)	Lead/Tail	Volume (ft ³)	Sacks	Slurry	Density	Planned TOC
Production	9,574'	N/A	N/A	N/A	N/A – Uncemented pre-perforated liner.	N/A	N/A



San Juan County, New Mexico

Allison #123H Sidetrack

Hilcorp Energy Company

5. Drilling Fluids Program

1. Proposed Drilling Fluids Program:

Proposed Drilling Fluids Program					
Interval	Fluid Type	Density (ppg)	Fluid Loss (mL/30 min)	Max Chlorides (mg/L)	Depth (ft. MD)
Production	LSND Brine (if needed)	8.5 – 10.5	4-14	1,000 400,000 (if CaCl added for density)	3,068' – 9,574'

Notes:

- In the 6-1/4" production section, CaCl brine will only be utilized if a weighting agent is needed to increase mud weight (for either well control or wellbore stability).
- Lost circulation material may be added to the mud systems to manage fluid losses as hole conditions dictate.
- The well will be drilled utilizing a closed-loop circulating system. Drill cuttings will be transported to an approved disposal site.
- Estimated total volume of drill cuttings for disposal: 247 bbls (1,286 ft³).

6. Estimated Pressures & Drilling Hazards

1. Estimated Pressures

- Estimated Reservoir Pressure of Fruitland Coal: 600 – 900 psi
- No over-pressured intervals expected.
- There is production from the Fruitland Coal formation in offset wells in the area, which could result in these formations being under-pressured.

2. Water Flows

- No water flows are expected.

3. Lost Circulation

- Lost circulation is possible in the coal section. Losses will be mitigated by adding LCM to the mud system.

4. Hydrogen Sulfide

- No hydrogen sulfide is expected to be encountered based on nearby well production.



San Juan County, New Mexico

Allison #123H Sidetrack

Hilcorp Energy Company

7. Testing, Logging, Coring

1. Mud Logging

- Mud loggers will collect formation samples every 30' from the surface casing shoe to both the TD of the production hole.

2. MWD

- Measurement while drilling tools will be utilized from the surface casing shoe to both the TD of the production hole to measure and record inclination and azimuth.

3. LWD

- Logging while drilling tools (gamma ray) will be utilized while drilling the production section from the intermediate casing kick-off to the production hole section TD to assist in staying in the desired coal seam while drilling the lateral section.

4. Open Hole Logging

- There are no planned open hole logs post drilling.

5. Coring

- There is no coring or formation testing planned.

8. Directional Drilling Plan

- The directional drilling plan and plot are attached.
- The directional plan is built from geologic targets from offset wells and lease boundaries. The production hole section will be landed and drilled horizontally within the target formation utilizing LWD tools to steer the wellbore. On-site adjustments to the directional plan will be made and formation and wellbore dictate.
- A whipstock will be utilized to exit the existing intermediate casing.

9. Pre-Drill Preparation Procedure

1. RU slickline, clear tubing to verify that it free of equipment that could become mobile while pulling. Set a 3-slip stop, if necessary
2. MIRU workover rig and associated equipment; NU and test BOP per HEC, State, and Federal guidelines.
3. TOOH with 2-7/8" tubing



San Juan County, New Mexico

Allison #123H Sidetrack

Hilcorp Energy Company

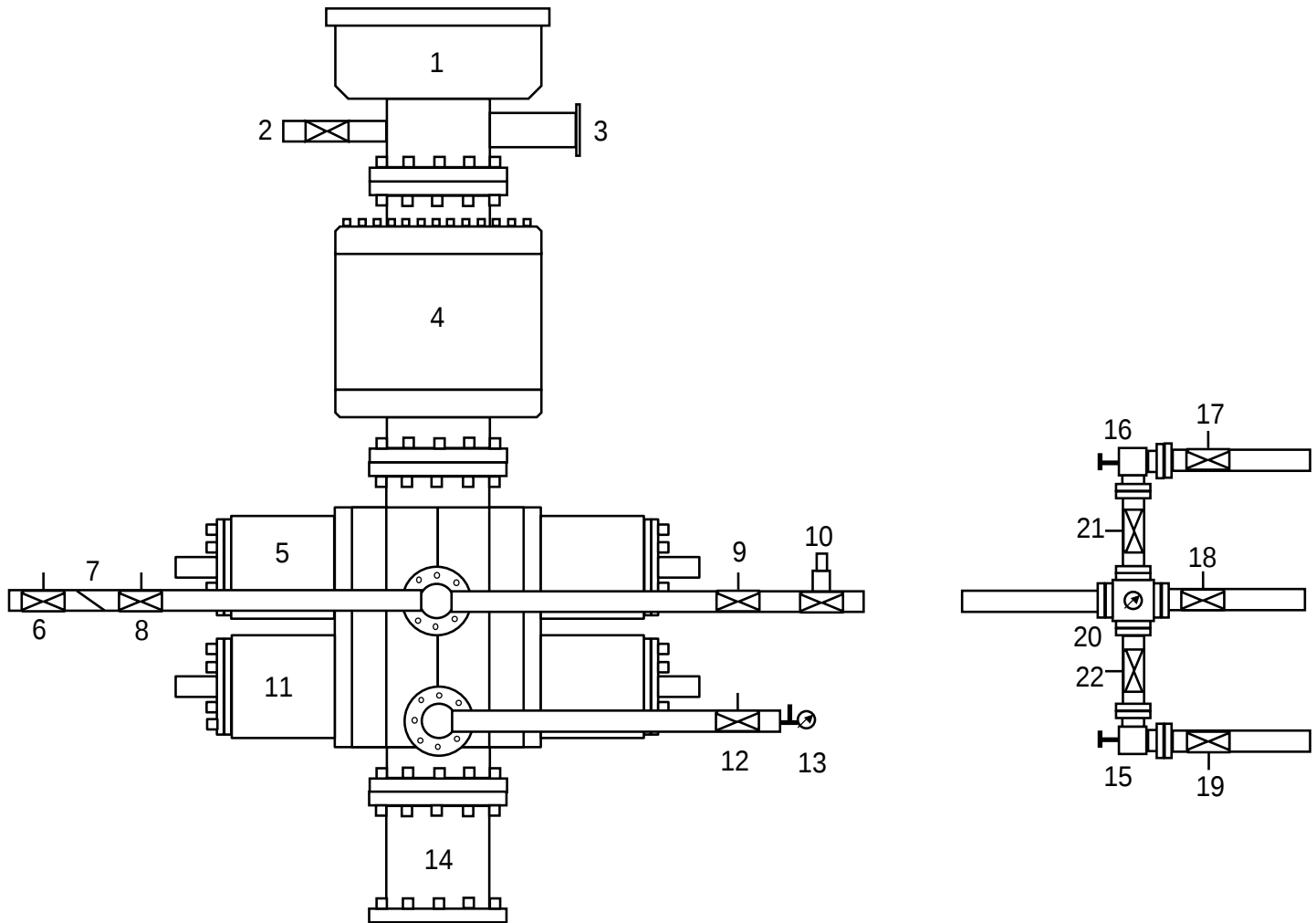
4. PU a 7" bridge plug and RIH with work string; set BP at +/- 3,108' to isolate the lower lateral and as a base for the whipstock.
5. RU pressure test truck. Perform a Mechanical Integrity Test on wellbore. Chart record the MIT test (Notify NMOCD/BLM 24hr before actual test).
6. Orient and set the whipstock
7. NDNU dryhole tree, RDMO workover rig

10. Post-Drill Completion Procedure

1. MIRU workover rig and associated equipment; NU and test BOP per HEC, State, and Federal guidelines.
2. RIH with fishing tools, latch and pull whipstock.
3. RIH w/ bit and drill out isolation plug, clean out to PBTD inside of the original wellbore.
4. RIH w/ completion setting below the lower Fruitland Coal lateral.
5. NDNU wellhead and production tree. Run pump and rods, if necessary
6. RDMO workover rig. Install facilities and turn the well to sales

Appendix A

Pressure Control Equipment Configuration



1	Rotating Head	12	Manual Isolation Valve
2	Flow Line	13	Needle Valve & Pressure Gauge
3	Fill-Up Line	14	Spacer Spool (if needed)
4	3M Annular Preventer	15	Manual Choke
5	3M Pipe Rams	16	Manual Choke
6	Manual Isolation Valve	17	Manual Isolation Valve
7	Check Valve	18	Manual Isolation Valve
8	Manual Isolation Valve	19	Manual Isolation Valve
9	Manual Isolation Valve	20	Valve Block & Pressure Gauge
10	High Closing Ratio Valve	21	Manual Isolation Valve
11	3M Blind Rams	22	Manual Isolation Valve

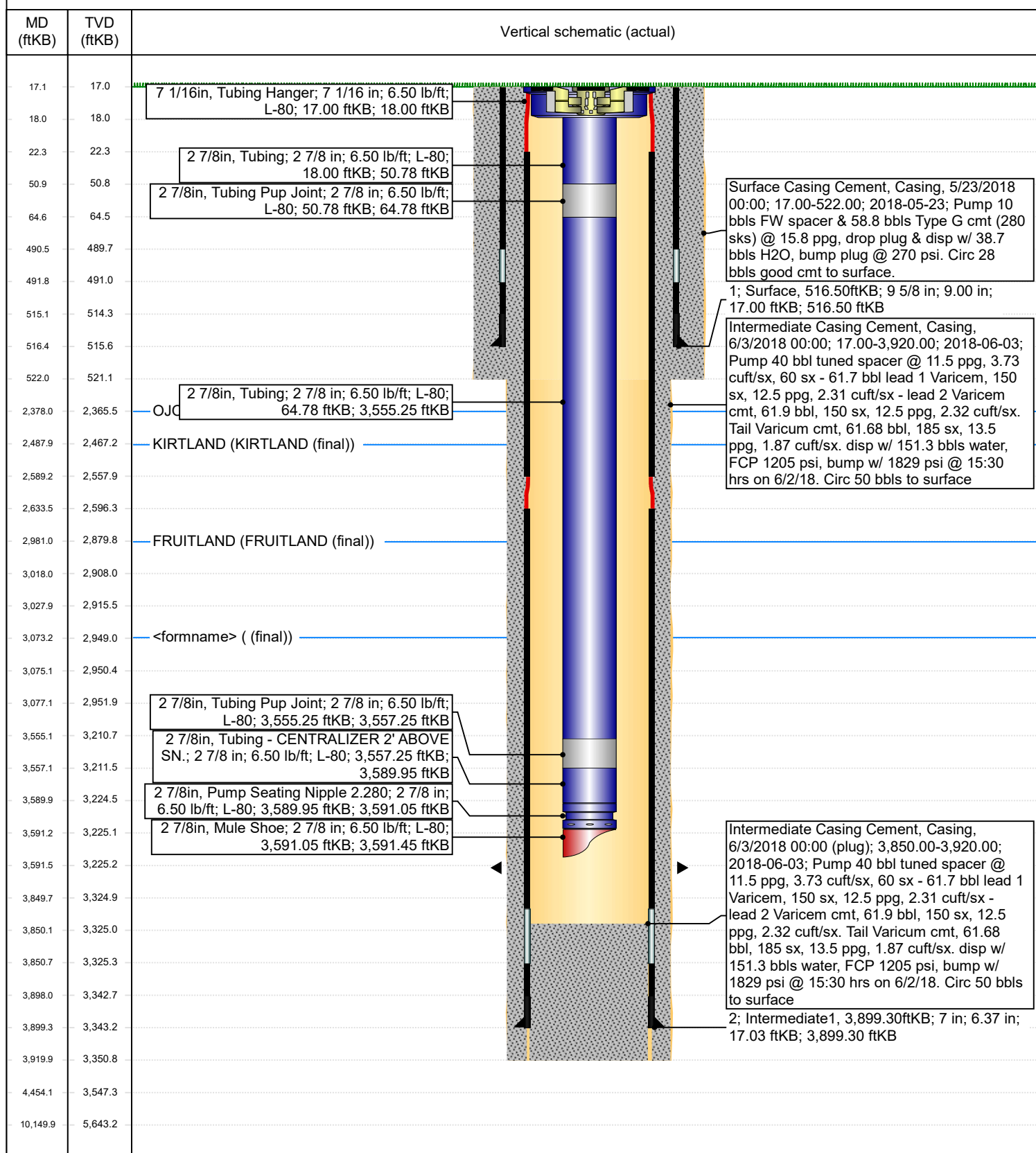


Current Schematic - Version 3

Well Name: ALLISON UNIT #123H

API / UWI 3004535611	Surface Legal Location 009-032N-007W-I	Field Name Area 5	Route 0504	State/Province NM	Well Configuration Type Horizontal
Ground Elevation (ft) 6,629.00	Original KB/RT Elevation (ft) 6,646.00	KB-Ground Distance (ft) 17.00	KB-Casing Flange Distance (ft) 6,629.00	KB-Tubing Hanger Distance (ft) 6,631.00	

Original Hole [Horizontal]



ALLISON UNIT 123H

PROPOSED LATERAL WBD
DRAWING NOT TO SCALE

State: NM
 County: San Juan
 API:
 GL: 6,629'
 KB: 17'

12-1/4" Surface Hole to 522' MD
 9-5/8" 32.3# H40 ST&C set at 517' MD
 Cement to surface

Window: 3,058-3,068' MD /
 2,938-2,945' TVD

6-1/4" Hole TD @ 9,574' MD / 3,130' TVD
 4-1/2" 11.6# J55 LT&C casing or equivalent
 Pre-Perforated Drop-off liner f/ 3,073-9,574' MD

Proposed whipstock @ 3,068' MD
 Proposed BP @ 3,108' MD

Lateral 2

Window: 3,589-3,599' MD /
 3,224-3,228' TVD

Liner*: TD @ 9,647' MD / 3,208' TVD

Lateral 1 ST 2

TD @ 9,647' MD / 3,208' TVD

Lateral 1 ST 1

TD @ 10,150' MD / 3,223' TVD

Liner*: TD @ 7,847' MD / 3,231' TVD

8-3/4" Hole TD @ 3,921' MD
 7" 23# L80 LT&C set at 3,899' MD/3,363' TVD
 Cement to surface

*6-1/4" hole
 4-1/2" 11.6# J55 casing
 Pre-Perforated Drop-off liner

Original Wellbore		
Formation	MD	TVD
OJO	2,378'	2,366'
KIRTLAND	2,488'	2,468'
FRUITLAND	2,981'	2,880'

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, NM 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, NM 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 30-045-35611	² Pool Code 71629	³ Pool Name BASIN FRUITLAND COAL LATERAL#3
⁴ Property Code 313977	⁵ Property Name ALLISON UNIT HZFC	⁶ Well Number 123H
⁷ OGRID No. 372171	⁸ Operator Name HILCORP ENERGY COMPANY	⁹ Elevation 6629'

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
I	9	32-N	7-W	10	1591	SOUTH	776	EAST	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
E	11	32-N	7-W	4	634	NORTH	641	WEST	SAN JUAN

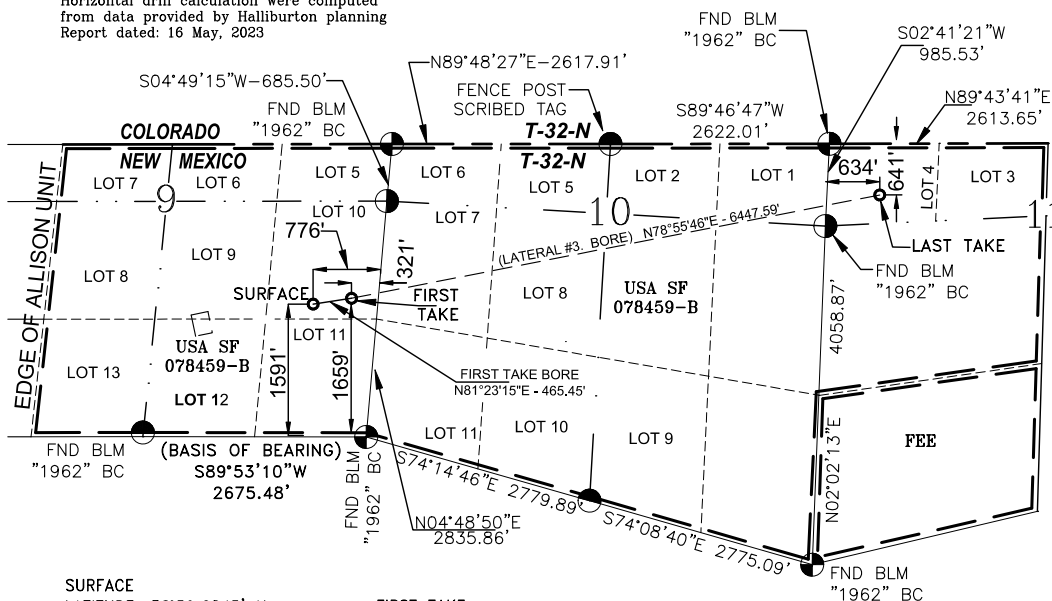
¹² Dedicated Acres FC = 972.64 ACRES	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

16

NOTE:

Horizontal drill calculation were computed
from data provided by Halliburton planning
Report dated: 16 May, 2023



SURFACE
LATITUDE: 36°59.6845' N
LONGITUDE: 107°33.9043' W
NAD27

LATITUDE: 36.994746° N
LONGITUDE: 107.565681° W
NAD83

FIRST TAKE
1659' FSL 321' FEL SEC. 9
LATITUDE: 36°59.6957' N
LONGITUDE: 107°33.8097' W
NAD27

LATITUDE: 36.994934° N
LONGITUDE: 107.564104° W
NAD83

LAST TAKE
634' FNL 641' FWL SEC. 11
LATITUDE: 36°59.8967' N
LONGITUDE: 107°32.5089' W
NAD27

LATITUDE: 36.998283° N
LONGITUDE: 107.542423° W
NAD83

BASIS OF BEARING:

BETWEEN FOUND MONUMENTS AT THE SOUTHEAST CORNER AND THE SOUTH
QUARTER CORNER OF SECTION 9, TOWNSHIP 32 NORTH, RANGE 7 WEST,
N.M.P.M. SAN JUAN COUNTY, NEW MEXICO.

LINE BEARS: S 89°53'10\" W A DISTANCE OF 2675.48 FEET AS MEASURED BY
G.P.S. STATE PLANE NM WEST NAD27.

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
a working interest, or to a voluntary pooling agreement
or a compulsory pooling order heretofore entered by the
division.

A Walker
Signature

7/12/2023
Date

Amanda Walker
Printed Name

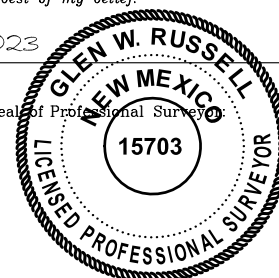
mwalker@hilcorp.com
E-mail Address

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.

JULY 5, 2023
Date of Survey

Signature and Seal of Professional Surveyor



GLEN W. RUSSELL
Certificate Number

15703

Hilcorp Energy
Interim Reclamation Plan
Allison 123 H
API: 30-045-35611
Unit I – Sec 09 -T32N-R7W
Lat:36.994742, Long: -107.565072
Footage: 1591' FSL & 776' FEL
San Juan County, NM

1. PRE- INTERIM RECLAMATION SITE INSPECTION

- 1.1) A pre-interim reclamation onsite inspection was conducted on May 22,2023 with BLM Environmental Protection Specialist Roger Herrera and Bobby Spearman Construction Foreman for Hilcorp Energy.
- 1.2) Location surface will be stripped of equipment as need. East hillside will be cut, laid down with the material windrowed along the North side of location as required within original disturbance to acquire additional working surface for sidetrack activities.

2. LOCATION INTERIM RECLAMATION PROCEDURE

- 2.1) Interim reclamation work will be completed after well sidetrack is completed.
- 2.2) Location tear drop will be re-defined as applicable during interim reclamation.
- 2.3) Windrowed material on North edge will be redistributed on the East slope and contoured to match original interim reclamation.
- 2.4) All disturbed areas will be seeded and mulched, any disturbed areas that are compacted will be ripped before seeding.
- 2.5) All trash and debris will be removed within 50' buffer outside of the location disturbance during reclamation.

3. ACCESS ROAD RECLAMATION PROCEDURE:

- 3.1) No lease access road issues were identified at the time of onsite.

4. SEEDING PROCEDURE

- 4.1) A Pinion/Juniper seed mix will be used for all reclaimed and disturbed areas of the location.
- 4.2) Drill seeding will be done where applicable and all other disturbed areas will be broadcast seeded and harrowed, broadcast seeding will be applied at a double the rate of seed.
- 4.3) Timing of the seeding will take place when the ground is not frozen or saturated.

5. WEED MANAGEMENT

- 5.1) No action is required at this time for weed management, no noxious weeds were identified during the onsite.

State of New Mexico
Energy, Minerals and Natural Resources Department

Submit Electronically
Via E-permitting

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

NATURAL GAS MANAGEMENT PLAN

This Natural Gas Management Plan must be submitted with each Application for Permit to Drill (APD) for a new or recompleted well.

Section 1 – Plan Description Effective May 25, 2021

I. Operator: Hilcorp Energy Company **OGRID:** 372171 **Date:** 7/12/2023

II. Type: ☒ Original ☐ Amendment due to ☐ 19.15.27.9.D(6)(a) NMAC ☐ 19.15.27.9.D(6)(b) NMAC ☐ Other.

If Other, please describe: _____

III. Well(s): Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water BBL/D
Allison Unit 123H	3004535611	I, 09, 32N, 07W	1591' FSL & 776' FEL	0	1800	100

IV. Central Delivery Point Name: Ignacio Processing Plant [See 19.15.27.9(D)(1) NMAC]

V. Anticipated Schedule: Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	Spud Date	TD Reached Date	Completion Commencement Date	Initial Flow Back Date	First Production Date
<u>Allison Unit 123H</u>	<u>3004535611</u>					

VI. Separation Equipment: ☒ Attach a complete description of how Operator will size separation equipment to optimize gas capture.

VII. Operational Practices: ☒ Attach a complete description of the actions Operator will take to comply with the requirements of Subsection A through F of 19.15.27.8 NMAC.

VIII. Best Management Practices: ☒ Attach a complete description of Operator's best management practices to minimize venting during active and planned maintenance.

Section 2 – Enhanced Plan

EFFECTIVE APRIL 1, 2022

Beginning April 1, 2022, an operator that is not in compliance with its statewide natural gas capture requirement for the applicable reporting area must complete this section.

☒ Operator certifies that it is not required to complete this section because Operator is in compliance with its statewide natural gas capture requirement for the applicable reporting area.

IX. Anticipated Natural Gas Production:

Well	API	Anticipated Average Natural Gas Rate MCF/D	Anticipated Volume of Natural Gas for the First Year MCF

X. Natural Gas Gathering System (NGGS):

Operator	System	ULSTR of Tie-in	Anticipated Gathering Start Date	Available Maximum Daily Capacity of System Segment Tie-in

XI. Map. ☐ Attach an accurate and legible map depicting the location of the well(s), the anticipated pipeline route(s) connecting the production operations to the existing or planned interconnect of the natural gas gathering system(s), and the maximum daily capacity of the segment or portion of the natural gas gathering system(s) to which the well(s) will be connected.

XII. Line Capacity. The natural gas gathering system ☐ will ☐ will not have capacity to gather 100% of the anticipated natural gas production volume from the well prior to the date of first production.

XIII. Line Pressure. Operator ☐ does ☐ does not anticipate that its existing well(s) connected to the same segment, or portion, of the natural gas gathering system(s) described above will continue to meet anticipated increases in line pressure caused by the new well(s).

☐ Attach Operator's plan to manage production in response to the increased line pressure.

XIV. Confidentiality: ☐ Operator asserts confidentiality pursuant to Section 71-2-8 NMSA 1978 for the information provided in Section 2 as provided in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and attaches a full description of the specific information for which confidentiality is asserted and the basis for such assertion.

Section 3 - Certifications

Effective May 25, 2021

Operator certifies that, after reasonable inquiry and based on the available information at the time of submittal:

☒ Operator will be able to connect the well(s) to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system; or

☐ Operator will not be able to connect to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system.

If Operator checks this box, Operator will select one of the following:

Well Shut-In. ☐ Operator will shut-in and not produce the well until it submits the certification required by Paragraph (4) of Subsection D of 19.15.27.9 NMAC; or

Venting and Flaring Plan. ☐ Operator has attached a venting and flaring plan that evaluates and selects one or more of the potential alternative beneficial uses for the natural gas until a natural gas gathering system is available, including:

- (a) power generation on lease;
- (b) power generation for grid;
- (c) compression on lease;
- (d) liquids removal on lease;
- (e) reinjection for underground storage;
- (f) reinjection for temporary storage;
- (g) reinjection for enhanced oil recovery;
- (h) fuel cell production; and
- (i) other alternative beneficial uses approved by the division.

Section 4 - Notices

1. If, at any time after Operator submits this Natural Gas Management Plan and before the well is spud:

(a) Operator becomes aware that the natural gas gathering system it planned to connect the well(s) to has become unavailable or will not have capacity to transport one hundred percent of the production from the well(s), no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised venting and flaring plan containing the information specified in Paragraph (5) of Subsection D of 19.15.27.9 NMAC; or

(b) Operator becomes aware that it has, cumulatively for the year, become out of compliance with its baseline natural gas capture rate or natural gas capture requirement, no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised Natural Gas Management Plan for each well it plans to spud during the next 90 days containing the information specified in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and shall file an update for each Natural Gas Management Plan until Operator is back in compliance with its baseline natural gas capture rate or natural gas capture requirement.

2. OCD may deny or conditionally approve an APD if Operator does not make a certification, fails to submit an adequate venting and flaring plan which includes alternative beneficial uses for the anticipated volume of natural gas produced, or if OCD determines that Operator will not have adequate natural gas takeaway capacity at the time a well will be spud.

I certify that, after reasonable inquiry, the statements in and attached to this Natural Gas Management Plan are true and correct to the best of my knowledge and acknowledge that a false statement may be subject to civil and criminal penalties under the Oil and Gas Act.

Signature:
Printed Name: Amanda Walker
Title: Operation Regulatory Tech Sr.
E-mail Address: mwalker@hilocorp.com
Date: 7/12/2023
Phone: 346.237.2177
OIL CONSERVATION DIVISION (Only applicable when submitted as a standalone form)
Approved By:
Title:
Approval Date:
Conditions of Approval:

Hilcorp Energy Natural Gas Management Plan Attachments

VI. Separation Equipment

The operator will select separation equipment for the maximum anticipated throughput and pressure to optimize gas capture. Separation equipment is sized according to manufacturer's design specifications. Separation vessels are built following the A.S.M.E. section VIII division 1 codes for pressure vessel design, fabrication, inspection, testing and certification. Anticipated well pressures and production rates are evaluated to select separation equipment according to the equipment's designed operating pressure and throughput.

After completion, the operator utilizes flowback equipment, including separators, to manage wellbore fluids and solids during the initial separation period. After the initial flowback period is complete the operator utilizes iterative facility separation equipment to ensure that optimal separation is achieved.

VII. Operational Practices 19.15.27.8 NMAC A through F

- A. The operator will maximize the recovery of natural gas and minimize the amount of gas vented or flared when technically and safely feasible as further described and detailed within the following subsections (B-F of 19.15.27.8). In all cases where natural gas venting and flaring requires regulatory reporting, reporting will be submitted accurately and within the required time frames.
- B. Venting and flaring during drilling operations:
 - a. New Drill HZ Gas Wells: The operator drills wells in the area by utilizing a balanced mud to safely drill the wellbore. This technique prevents gas from coming to surface during the drilling process. If there is an emergency or malfunction and natural gas does come to surface the natural gas will be captured and routed to sales if technically and safely feasible.
- C. Venting and flaring during completion or recompletion operations:
 - a. New Drill HZ Gas Wells: The operator's facilities are designed to handle the maximum throughput and pressures from the newly drilled and completed wellbores. The amount of gas vented and flared will be minimized when technically and safely feasible. During initial flowback and initial separation flowback the operator will utilize contracted flowback equipment, including separators, to manage wellbore fluids and solids. The initial flowback period will be minimized and flow will be sent to separation equipment as soon as possible to reduce the amount of gas that is vented to atmosphere. The natural gas will be utilized on site as needed for fuel gas and natural gas will be sold.
- D. Venting and flaring during production operations:
 - a. New Drill HZ Gas Wells: The operator's facilities are designed to handle the maximum throughput and pressures from producing wellbores. The amount of gas vented and flared will be minimized when technically and safely feasible.

Operations will effectively manage the following scenarios to minimize the quantity of natural gas that is vented or flared:

- (a) If there is an emergency or malfunction vented or flared natural gas will be reported, if required, and the emergency or malfunction will be resolved as soon as technically and safely feasible.
- (b) If the wellbore needs to be unloaded to atmosphere the operator will not vent the well after the well has achieved a stabilized rate and pressure. The operator will remain on site during unloading. Plunger lift systems will be optimized to reduce the amount of natural gas venting. Downhole maintenance, such as workovers, swabbing, etc. will only be conducted as needed and best management practices will be utilized to reduce venting of natural gas.
- (c) The operator will minimize the amount of time that natural gas is vented to atmosphere from gauging and sampling a storage tank or low pressure vessel. The formation is only anticipated to produce water and therefore tank emissions are anticipated to be negligible.
- (d) The operator will reduce the amount of time needed for loading out liquids from a storage tanks or other low-pressure vessels whenever feasible. Operations will always utilize the water transfer systems when available. Water loading emissions are anticipated to be negligible.
- (e) Equipment will be repaired and maintained routinely to minimize the venting or flaring of natural gas. Repairs and maintenance will be conducted in a manner that minimizes the amount of natural gas vented to atmosphere through the isolation of the equipment that is being repaired or maintained.
- (f) Electric controllers and pumps will be installed to replace pneumatic controllers whenever feasible. Pneumatic controllers and pumps will be inspected frequently to ensure that no excess gas is vented to atmosphere.
- (g) No dehydration or amine units are anticipated to be set on location.
- (h) Compressors, compressor engines, turbines, flanges, connectors, valves, storage tanks, and other low-pressure vessels and flanges will be routinely inspected to ensure that no excess venting occurs outside of normal operations.
- (i) Regulatory required testing, such as bradenhead and packer testing will be performed in a manner that minimizes the amount of natural gas vented to atmosphere.
- (j) If natural gas does not meet gathering pipeline specifications gas samples will be collected twice per week to determine when pipeline specification gas content has been achieved. During this time frame gas will be flared and not vented to atmosphere. Natural gas that meets pipeline specifications will be sold via pipeline and natural gas that can be utilized for fuel gas will be used during this time.
- (k) If pipeline, equipment, or facilities need purged of impurities gas losses will be minimized as much as technically and safely feasible.

E. Performance standards:

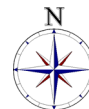
- a. The production facilities are designed to handle the maximum throughput and pressures from producing wellbores and will be designed to minimize waste. The amount of gas vented and flared will be minimized when technically and safely feasible.
 - b. All tanks that are routed to a control device that is installed after 5/25/2021 will have an automatic gauging system to minimize the amount of vented natural gas.
 - c. If a flare stack is installed or replaced after 5/25/2021 it will be equipped with an automatic ignitor or continuous pilot. The flare stack will be properly sized and designed to ensure proper combustion efficiency. The flare stack will be located 100 feet away from the nearest wellhead or storage tank.
 - d. AVO inspections will be conducted weekly for the year after completion and for all wells producing greater than 60,000 cubic feet of natural gas daily. The AVO inspection will include all components, including flare stacks, thief hatches, closed vent systems, pumps, compressors, pressure relief devices, valves, lines, flanges, connectors, and associated pipeline to identify any leaks and releases by comprehensive auditory, visual, and olfactory inspection. The AVO inspection records will be maintained for 5 years which will be available at the department's request. Identified leaks will be repaired as soon as feasible to minimize the amount of vented natural gas.
- F. Measurement or estimation of vented and flared natural gas.
- a. The volume of natural gas that is vented, flared or consumed for beneficial use will be measured when possible, or estimated, during drilling, completions, or production operations.
 - b. Equipment will be installed to measure the volume of natural gas flared for all APD's issued after 5/25/2021 on facilities that will have an average daily gas rate greater than 60,000 cubic feet of natural gas. Measurement equipment will conform to API MPMS Chapter 14.10 regulations. The measurement equipment will not have a manifold that allows the diversion of natural gas around the metering element except for the sole purpose of inspecting and servicing the measurement equipment. If metering is not practical then the volume of gas will be estimated.

Project: San Juan, NM
Site: Ignacio Blanco (32N7W9)
Well: Allison HZFC UN 123H
Wellbore: Lateral 1 ST2
Design: WP1
Time/Date: 14:59, May 16 2023

PROJECT DETAILS: San Juan, NM

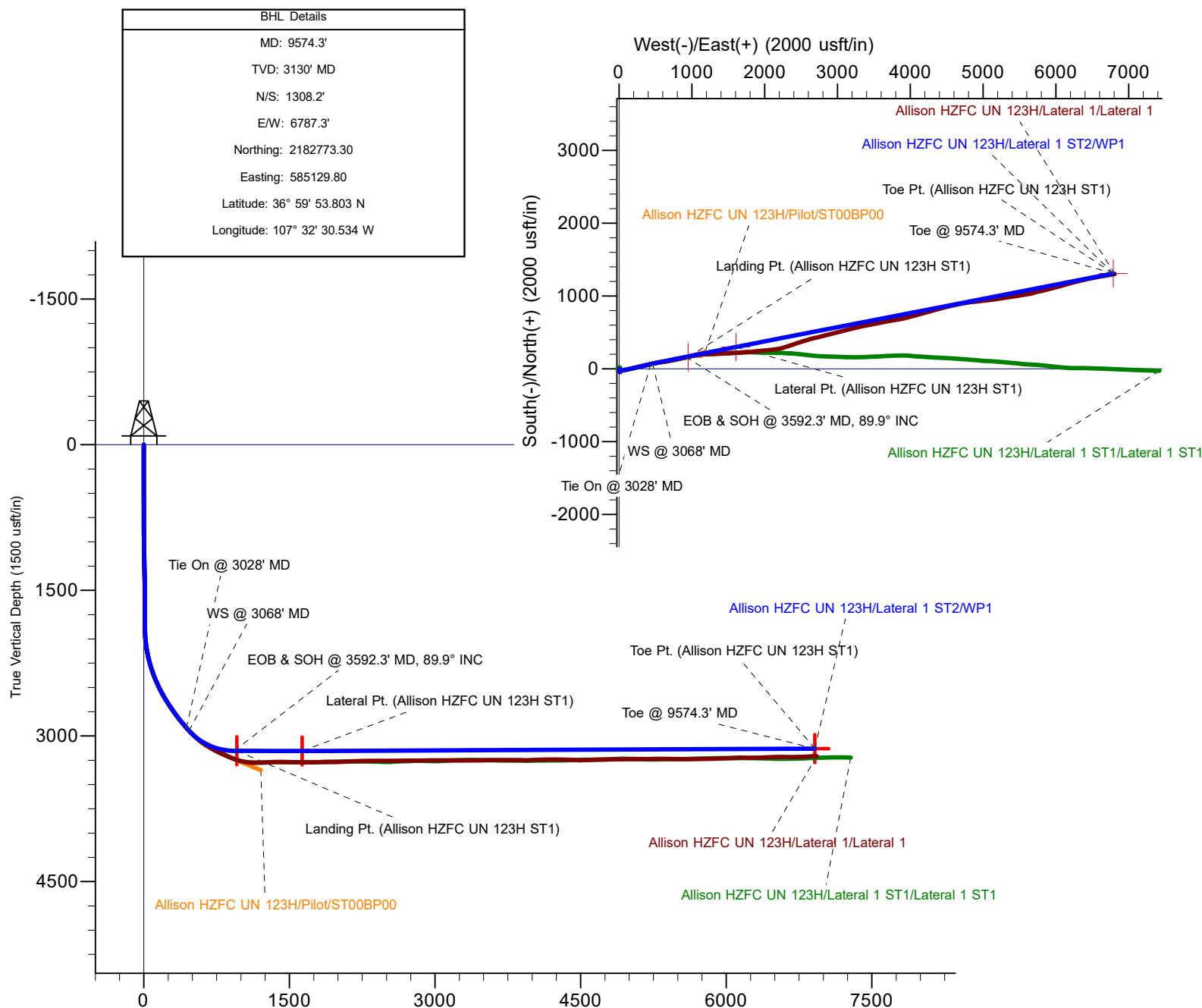
Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico West 3003

System Datum: Mean Sea Level



Reference is Grid North

WP1														
Surface Location:														
Northing 2181465.10			Easting 578342.50		Latitude 36° 59' 41.064 N		Longitude 107° 33' 54.251 W							
Reference Elev'n:			RKB-MSL= 6644 @ 6644.0usft 6629.0											
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect					
1	3028.0	41.30	76.43	2915.5	63.8	434.3	0.00	0.00	438.5					
2	3068.0	42.15	77.70	2945.4	69.7	460.2	3.00	45.00	465.1					
3	3592.3	89.85	78.87	3152.6	163.3	916.0	9.10	1.57	930.4					
4	4352.6	89.85	78.87	3154.5	310.1	1662.0	0.00	0.00	1690.6					
5	4374.3	90.27	78.98	3154.5	314.2	1683.2	2.00	15.04	1712.3					
6	9574.3	90.27	78.98	3130.0	1308.2	6787.3	0.00	0.00	6912.2					
Name			Target Data			Northing		Easting		Latitude		Longitude		Shape
Toe Pt. (Allison HZFC UN 123H ST1)			TVD	+N/-S	+E/-W	2182773.30		585129.80		36° 59' 53.803 N		107° 32' 30.534 W		Point
Landing Pt. (Allison HZFC UN 123H ST1)			3130.0	1308.2	6787.3	2181622.10		579289.20		36° 59' 42.590 N		107° 33' 42.576 W		Point
Lateral Pt. (Allison HZFC UN 123H ST1)			3152.0	157.0	946.7	2181763.90		579945.50		36° 59' 43.974 N		107° 33' 34.480 W		Point



Hilcorp Energy Company

San Juan, NM

Ignacio Blanco (32N7W9)

Allison HZFC UN 123H

Lateral 1 ST2

Plan: WP1

Standard Planning Report

08 June, 2023

Halliburton
Planning Report

Database:	EDM 5000.17 Single User Db	Local Co-ordinate Reference:	Well Allison HZFC UN 123H
Company:	Hilcorp Energy Company	TVD Reference:	RKB-MSL= 6644 @ 6644.0usft
Project:	San Juan, NM	MD Reference:	RKB-MSL= 6644 @ 6644.0usft
Site:	Ignacio Blanco (32N7W9)	North Reference:	Grid
Well:	Allison HZFC UN 123H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral 1 ST2		
Design:	WP1		

Project	San Juan, NM		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico West 3003		

Site	Ignacio Blanco (32N7W9)		
Site Position:		Northing:	2,181,465.10 usft
From:	Map	Easting:	578,342.50 usft
Position Uncertainty:	5.0 usft	Slot Radius:	13-3/16 "
		Latitude:	36° 59' 41.064 N
		Longitude:	107° 33' 54.251 W

Well	Allison HZFC UN 123H		
Well Position	+N/-S	0.0 usft	Northing: 2,181,465.10 usft
	+E/-W	0.0 usft	Easting: 578,342.50 usft
Position Uncertainty	1.0 usft	Wellhead Elevation:	usft
Grid Convergence:	0.16 °	Ground Level:	6,629.0 usft

Wellbore	Lateral 1 ST2				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2023	5/16/2023	8.63	63.40	49,498.90985199

Design	WP1				
Audit Notes:					
Version:	Phase:	PROTOTYPE	Tie On Depth:	3,028.0	
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.0	0.0	0.0	79.09	

Plan Survey Tool Program	Date	6/8/2023			
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	3,028.0	9,574.2	WP1 (Lateral 1 ST2)	3_MWD+HRGM	
				B001Mb: HRGM declination co	

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
3,028.0	41.30	76.43	2,915.5	63.8	434.3	0.00	0.00	0.00	0.00	
3,068.0	42.15	77.70	2,945.4	69.7	460.2	3.00	2.12	3.16	45.00	
3,592.3	89.85	78.87	3,152.6	163.3	916.0	9.10	9.10	0.22	1.57	
4,352.6	89.85	78.87	3,154.5	310.1	1,662.0	0.00	0.00	0.00	0.00	
4,374.3	90.27	78.98	3,154.5	314.2	1,683.2	2.00	1.93	0.52	15.04	
9,574.3	90.27	78.98	3,130.0	1,308.2	6,787.3	0.00	0.00	0.00	0.00	Toe Pt. (Allison HZFC

Halliburton

Planning Report

Database:	EDM 5000.17 Single User Db	Local Co-ordinate Reference:	Well Allison HZFC UN 123H
Company:	Hilcorp Energy Company	TVD Reference:	RKB-MSL= 6644 @ 6644.0usft
Project:	San Juan, NM	MD Reference:	RKB-MSL= 6644 @ 6644.0usft
Site:	Ignacio Blanco (32N7W9)	North Reference:	Grid
Well:	Allison HZFC UN 123H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral 1 ST2		
Design:	WP1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
570.0	5.66	167.70	569.1	-27.5	6.0	0.7	0.99	0.99	0.00
601.0	5.99	166.52	599.9	-30.6	6.7	0.8	1.13	1.06	-3.81
662.0	4.67	163.33	660.6	-36.0	8.1	1.2	2.22	-2.16	-5.23
725.0	3.51	175.56	723.5	-40.4	9.0	1.2	2.29	-1.84	19.41
788.0	1.47	187.41	786.4	-43.1	9.1	0.8	3.32	-3.24	18.81
851.0	0.10	76.46	849.4	-43.9	9.0	0.6	2.39	-2.17	-176.11
914.0	0.57	23.88	912.4	-43.6	9.2	0.8	0.82	0.75	-83.46
977.0	0.89	34.57	975.4	-42.9	9.6	1.3	0.55	0.51	16.97
1,039.0	0.83	46.86	1,037.4	-42.2	10.2	2.0	0.31	-0.10	19.82
1,102.0	0.81	54.58	1,100.4	-41.7	10.9	2.8	0.18	-0.03	12.25
1,165.0	1.11	53.82	1,163.4	-41.0	11.8	3.8	0.48	0.48	-1.21
1,228.0	1.35	53.43	1,226.4	-40.2	12.9	5.0	0.38	0.38	-0.62
1,290.0	1.40	45.04	1,288.4	-39.3	14.0	6.3	0.33	0.08	-13.53
1,353.0	1.37	40.94	1,351.3	-38.2	15.0	7.5	0.16	-0.05	-6.51
1,416.0	1.38	36.09	1,414.3	-37.0	16.0	8.7	0.19	0.02	-7.70
1,479.0	0.95	11.34	1,477.3	-35.8	16.5	9.4	1.04	-0.68	-39.29
1,542.0	1.24	359.69	1,540.3	-34.7	16.6	9.7	0.58	0.46	-18.49
1,605.0	1.25	358.10	1,603.3	-33.3	16.6	10.0	0.06	0.02	-2.52
1,667.0	1.69	351.74	1,665.3	-31.7	16.4	10.1	0.76	0.71	-10.26
1,729.0	1.90	345.47	1,727.2	-29.8	16.0	10.1	0.46	0.34	-10.11
1,790.0	1.41	335.02	1,788.2	-28.1	15.5	9.9	0.94	-0.80	-17.13
1,851.0	0.41	77.08	1,849.2	-27.4	15.4	9.9	2.54	-1.64	167.31
1,913.0	1.91	96.51	1,911.2	-27.5	16.6	11.1	2.47	2.42	31.34
1,974.0	3.83	85.04	1,972.1	-27.4	19.6	14.1	3.27	3.15	-18.80
2,035.0	6.28	82.40	2,032.9	-26.8	25.0	19.5	4.03	4.02	-4.33
2,096.0	9.06	79.54	2,093.3	-25.5	33.0	27.6	4.60	4.56	-4.69
2,158.0	11.47	79.79	2,154.3	-23.5	43.9	38.6	3.89	3.89	0.40
2,219.0	13.92	81.54	2,213.8	-21.4	57.1	52.0	4.07	4.02	2.87
2,280.0	16.69	79.09	2,272.7	-18.6	73.0	68.1	4.66	4.54	-4.02
2,342.0	18.74	76.63	2,331.7	-14.6	91.4	87.0	3.52	3.31	-3.97
2,403.0	20.97	76.20	2,389.1	-9.8	111.5	107.7	3.66	3.66	-0.70
2,464.0	23.51	77.84	2,445.5	-4.6	134.0	130.7	4.29	4.16	2.69
2,526.0	26.13	77.58	2,501.8	1.0	159.5	156.8	4.23	4.23	-0.42
2,587.0	28.59	77.05	2,556.0	7.1	186.8	184.8	4.05	4.03	-0.87
2,650.0	31.20	77.98	2,610.6	13.9	217.5	216.2	4.21	4.14	1.48
2,713.0	32.91	77.92	2,664.0	20.9	250.2	249.6	2.71	2.71	-0.10
2,776.0	34.06	77.83	2,716.5	28.2	284.1	284.3	1.83	1.83	-0.14
2,839.0	35.97	76.58	2,768.1	36.2	319.4	320.5	3.24	3.03	-1.98
2,902.0	37.89	76.14	2,818.5	45.1	356.2	358.3	3.08	3.05	-0.70
2,965.0	39.62	76.86	2,867.6	54.3	394.5	397.7	2.84	2.75	1.14
3,028.0	41.30	76.43	2,915.5	63.8	434.3	438.5	2.70	2.67	-0.68
3,068.0	42.15	77.70	2,945.4	69.7	460.2	465.1	3.00	2.12	3.19
3,100.0	45.06	77.82	2,968.6	74.4	481.8	487.2	9.10	9.10	0.35
3,150.0	49.61	77.97	3,002.4	82.1	517.7	523.9	9.10	9.10	0.31
3,200.0	54.16	78.11	3,033.3	90.2	556.2	563.3	9.10	9.10	0.27
3,250.0	58.71	78.23	3,060.9	98.8	597.0	604.9	9.10	9.10	0.24
3,300.0	63.25	78.34	3,085.2	107.7	639.8	648.6	9.10	9.10	0.22
3,350.0	67.80	78.44	3,105.9	116.8	684.4	694.1	9.10	9.10	0.20
3,400.0	72.35	78.53	3,122.9	126.2	730.4	741.1	9.10	9.10	0.19
3,450.0	76.90	78.62	3,136.2	135.7	777.6	789.3	9.10	9.10	0.18
3,500.0	81.45	78.71	3,145.6	145.4	825.8	838.4	9.10	9.10	0.17
3,550.0	86.00	78.80	3,151.0	155.1	874.5	888.1	9.10	9.10	0.17
3,592.3	89.85	78.87	3,152.6	163.3	916.0	930.4	9.10	9.10	0.17

Halliburton

Planning Report

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Wellbore:	Lateral 1 ST2		
Design:	WP1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
3,600.0	89.85	78.87	3,152.6	164.7	923.5	938.0	0.00	0.00	0.00	
3,700.0	89.85	78.87	3,152.8	184.1	1,021.7	1,038.0	0.00	0.00	0.00	
3,800.0	89.85	78.87	3,153.1	203.4	1,119.8	1,138.0	0.00	0.00	0.00	
3,900.0	89.85	78.87	3,153.4	222.7	1,217.9	1,238.0	0.00	0.00	0.00	
4,000.0	89.85	78.87	3,153.6	242.0	1,316.0	1,338.0	0.00	0.00	0.00	
4,100.0	89.85	78.87	3,153.9	261.3	1,414.1	1,438.0	0.00	0.00	0.00	
4,200.0	89.85	78.87	3,154.1	280.6	1,512.3	1,538.0	0.00	0.00	0.00	
4,300.0	89.85	78.87	3,154.4	299.9	1,610.4	1,638.0	0.00	0.00	0.00	
4,352.6	89.85	78.87	3,154.5	310.1	1,662.0	1,690.6	0.00	0.00	0.00	
4,374.3	90.27	78.98	3,154.5	314.2	1,683.2	1,712.3	2.00	1.93	0.52	
4,400.0	90.27	78.98	3,154.4	319.1	1,708.5	1,738.0	0.00	0.00	0.00	
4,500.0	90.27	78.98	3,153.9	338.3	1,806.7	1,838.0	0.00	0.00	0.00	
4,600.0	90.27	78.98	3,153.4	357.4	1,904.8	1,938.0	0.00	0.00	0.00	
4,700.0	90.27	78.98	3,153.0	376.5	2,003.0	2,038.0	0.00	0.00	0.00	
4,800.0	90.27	78.98	3,152.5	395.6	2,101.1	2,138.0	0.00	0.00	0.00	
4,900.0	90.27	78.98	3,152.0	414.7	2,199.3	2,238.0	0.00	0.00	0.00	
5,000.0	90.27	78.98	3,151.6	433.8	2,297.4	2,338.0	0.00	0.00	0.00	
5,100.0	90.27	78.98	3,151.1	452.9	2,395.6	2,438.0	0.00	0.00	0.00	
5,200.0	90.27	78.98	3,150.6	472.1	2,493.7	2,538.0	0.00	0.00	0.00	
5,300.0	90.27	78.98	3,150.1	491.2	2,591.9	2,638.0	0.00	0.00	0.00	
5,400.0	90.27	78.98	3,149.7	510.3	2,690.0	2,738.0	0.00	0.00	0.00	
5,500.0	90.27	78.98	3,149.2	529.4	2,788.2	2,838.0	0.00	0.00	0.00	
5,600.0	90.27	78.98	3,148.7	548.5	2,886.4	2,938.0	0.00	0.00	0.00	
5,700.0	90.27	78.98	3,148.3	567.6	2,984.5	3,038.0	0.00	0.00	0.00	
5,800.0	90.27	78.98	3,147.8	586.8	3,082.7	3,138.0	0.00	0.00	0.00	
5,900.0	90.27	78.98	3,147.3	605.9	3,180.8	3,238.0	0.00	0.00	0.00	
6,000.0	90.27	78.98	3,146.8	625.0	3,279.0	3,338.0	0.00	0.00	0.00	
6,100.0	90.27	78.98	3,146.4	644.1	3,377.1	3,438.0	0.00	0.00	0.00	
6,200.0	90.27	78.98	3,145.9	663.2	3,475.3	3,538.0	0.00	0.00	0.00	
6,300.0	90.27	78.98	3,145.4	682.3	3,573.4	3,638.0	0.00	0.00	0.00	
6,400.0	90.27	78.98	3,145.0	701.4	3,671.6	3,738.0	0.00	0.00	0.00	
6,500.0	90.27	78.98	3,144.5	720.6	3,769.8	3,838.0	0.00	0.00	0.00	
6,600.0	90.27	78.98	3,144.0	739.7	3,867.9	3,938.0	0.00	0.00	0.00	
6,700.0	90.27	78.98	3,143.5	758.8	3,966.1	4,038.0	0.00	0.00	0.00	
6,800.0	90.27	78.98	3,143.1	777.9	4,064.2	4,138.0	0.00	0.00	0.00	
6,900.0	90.27	78.98	3,142.6	797.0	4,162.4	4,238.0	0.00	0.00	0.00	
7,000.0	90.27	78.98	3,142.1	816.1	4,260.5	4,338.0	0.00	0.00	0.00	
7,100.0	90.27	78.98	3,141.7	835.2	4,358.7	4,438.0	0.00	0.00	0.00	
7,200.0	90.27	78.98	3,141.2	854.4	4,456.8	4,538.0	0.00	0.00	0.00	
7,300.0	90.27	78.98	3,140.7	873.5	4,555.0	4,638.0	0.00	0.00	0.00	
7,400.0	90.27	78.98	3,140.2	892.6	4,653.1	4,738.0	0.00	0.00	0.00	
7,500.0	90.27	78.98	3,139.8	911.7	4,751.3	4,838.0	0.00	0.00	0.00	
7,600.0	90.27	78.98	3,139.3	930.8	4,849.5	4,938.0	0.00	0.00	0.00	
7,700.0	90.27	78.98	3,138.8	949.9	4,947.6	5,038.0	0.00	0.00	0.00	
7,800.0	90.27	78.98	3,138.4	969.0	5,045.8	5,138.0	0.00	0.00	0.00	
7,900.0	90.27	78.98	3,137.9	988.2	5,143.9	5,238.0	0.00	0.00	0.00	
8,000.0	90.27	78.98	3,137.4	1,007.3	5,242.1	5,338.0	0.00	0.00	0.00	
8,100.0	90.27	78.98	3,136.9	1,026.4	5,340.2	5,438.0	0.00	0.00	0.00	
8,200.0	90.27	78.98	3,136.5	1,045.5	5,438.4	5,538.0	0.00	0.00	0.00	
8,300.0	90.27	78.98	3,136.0	1,064.6	5,536.5	5,638.0	0.00	0.00	0.00	
8,400.0	90.27	78.98	3,135.5	1,083.7	5,634.7	5,738.0	0.00	0.00	0.00	
8,500.0	90.27	78.98	3,135.1	1,102.9	5,732.9	5,838.0	0.00	0.00	0.00	
8,600.0	90.27	78.98	3,134.6	1,122.0	5,831.0	5,938.0	0.00	0.00	0.00	
8,700.0	90.27	78.98	3,134.1	1,141.1	5,929.2	6,038.0	0.00	0.00	0.00	

Halliburton

Planning Report

Database:	EDM 5000.17 Single User Db	Local Co-ordinate Reference:	Well Allison HZFC UN 123H
Company:	Hilcorp Energy Company	TVD Reference:	RKB-MSL= 6644 @ 6644.0usft
Project:	San Juan, NM	MD Reference:	RKB-MSL= 6644 @ 6644.0usft
Site:	Ignacio Blanco (32N7W9)	North Reference:	Grid
Well:	Allison HZFC UN 123H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral 1 ST2		
Design:	WP1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
8,800.0	90.27	78.98	3,133.6	1,160.2	6,027.3	6,138.0	0.00	0.00	0.00	
8,900.0	90.27	78.98	3,133.2	1,179.3	6,125.5	6,238.0	0.00	0.00	0.00	
9,000.0	90.27	78.98	3,132.7	1,198.4	6,223.6	6,338.0	0.00	0.00	0.00	
9,100.0	90.27	78.98	3,132.2	1,217.5	6,321.8	6,438.0	0.00	0.00	0.00	
9,200.0	90.27	78.98	3,131.8	1,236.7	6,419.9	6,538.0	0.00	0.00	0.00	
9,300.0	90.27	78.98	3,131.3	1,255.8	6,518.1	6,638.0	0.00	0.00	0.00	
9,400.0	90.27	78.98	3,130.8	1,274.9	6,616.2	6,738.0	0.00	0.00	0.00	
9,500.0	90.27	78.98	3,130.3	1,294.0	6,714.4	6,838.0	0.00	0.00	0.00	
9,574.3	90.27	78.98	3,130.0	1,308.2	6,787.3	6,912.2	0.00	0.00	0.00	

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
- hit/miss target										
- Shape										
Toe Pt. (Allison HZFC UI	0.00	0.00	3,130.0	1,308.2	6,787.3	2,182,773.30	585,129.80	36° 59' 53.803 N	107° 32' 30.534 W	
- plan hits target center										
- Point										
Landing Pt. (Allison HZF	0.00	0.00	3,152.0	157.0	946.7	2,181,622.10	579,289.20	36° 59' 42.590 N	107° 33' 42.576 W	
- plan misses target center by 12.1usft at 3621.2usft MD (3152.6 TVD, 168.8 N, 944.4 E)										
- Point										
Lateral Pt. (Allison HZFC	0.00	0.00	3,154.0	298.8	1,603.0	2,181,763.90	579,945.50	36° 59' 43.974 N	107° 33' 34.480 W	
- plan misses target center by 0.5usft at 4292.6usft MD (3154.4 TVD, 298.5 N, 1603.1 E)										
- Point										

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
155.0	155.0	9-5/8" Surface Casing	9-5/8	9-5/8	

Formations					
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
2,378.0	2,365.7	OJO ALAMO		0.00	
2,488.0	2,467.5	KIRTLAND		0.00	
2,984.0	2,882.2	FRUITLAND COAL		0.00	

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates	Comment		
		+N/-S (usft)	+E/-W (usft)		
3,028.0	2,915.5	63.8	434.3	Tie On @ 3028' MD	
3,068.0	2,945.4	69.7	460.2	WS @ 3068' MD	
3,592.3	3,152.6	163.3	916.0	EOB & SOH @ 3592.3' MD, 89.9° INC	
9,574.3	3,130.0	1,308.2	6,787.3	Toe @ 9574.3' MD	

Hilcorp Energy Company

San Juan, NM

Ignacio Blanco (32N7W9)

Allison HZFC UN 123H

Lateral 1 ST2

WP1

Anticollision Report

16 May, 2023

Halliburton

Anticollision Report

Company:	Hilcorp Energy Company	Local Co-ordinate Reference:	Well Allison HZFC UN 123H
Project:	San Juan, NM	TVD Reference:	RKB-MSL= 6644 @ 6644.0usft
Reference Site:	Ignacio Blanco (32N7W9)	MD Reference:	RKB-MSL= 6644 @ 6644.0usft
Site Error:	5.0 usft	North Reference:	Grid
Reference Well:	Allison HZFC UN 123H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral 1 ST2	Database:	EDM 5000.17 Single User Db
Reference Design:	WP1	Offset TVD Reference:	Offset Datum

Reference	WP1		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD + Stations Interval 25.0usft	Error Model:	ISCWSA
Depth Range:	3,028.0 to 9,574.3usft	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum centre distance of 3,000.0usft	Error Surface:	Pedal Curve
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Through Borehole Radius

Survey Tool Program	Date 5/16/2023				
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
570.0	3,028.0	Survey #1 (Pilot)	3_MWD	A001Mb/ISC4: BGGM declination correction only	
3,028.0	9,574.2	WP1 (Lateral 1 ST2)	3_MWD+HRGM	B001Mb: HRGM declination correction only	

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						
Ignacio Blanco (32N7W9)						
Allison HZFC UN 123H - Lateral 1 - Lateral 1	3,030.7	3,030.7	0.0	-2.2	0.000	Collision RiskProcedures Re
Allison HZFC UN 123H - Lateral 1 - Lateral 1	8,703.0	8,761.0	99.3	-30.9	0.763	Collision RiskProcedures Re
Allison HZFC UN 123H - Lateral 1 ST1 - Lateral 1 ST1	3,030.7	3,030.7	0.0	-2.2	0.000	Collision RiskProcedures Re
Allison HZFC UN 123H - Lateral 1 ST1 - Lateral 1 ST1	3,100.0	3,100.0	0.3	-3.2	0.083	Collision RiskProcedures Re
Allison HZFC UN 123H - Pilot - ST00BP00	3,030.7	3,030.7	0.0	-2.2	0.000	Collision RiskProcedures Re
Allison HZFC UN 123H - Pilot - ST00BP00	3,100.0	3,100.0	0.3	-3.2	0.083	Collision RiskProcedures Re

Offset Design:	Ignacio Blanco (32N7W9) - Allison HZFC UN 123H - Lateral 1 - Lateral 1											Offset Site Error:	5.0 usft
Survey Program:	570-3_MWD, 3664-3_MWD											Offset Well Error:	1.0 usft
Reference	Offset	Semi Major Axis		Highside Toolface		Offset Wellbore Centre		Distance		Minimum Separation	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)	Separation Factor		
3,030.7	2,917.6	3,030.7	2,917.6	0.3	0.1	-42.90	64.2	436.0	0.0	-2.2	2.23	0.000	Collision RiskProcedures Req'd, CC, S
3,053.0	2,934.2	3,053.0	2,934.2	2.9	1.2	-43.43	67.6	450.5	0.1	-2.4	2.48	0.030	Collision RiskProcedures Req'd
3,068.0	2,945.4	3,068.0	2,945.3	2.9	1.9	-43.78	69.9	460.3	0.2	-2.5	2.72	0.069	Collision RiskProcedures Req'd
3,078.0	2,952.8	3,078.0	2,952.7	2.9	2.4	-51.08	71.4	466.9	0.2	-2.7	2.94	0.082	Collision RiskProcedures Req'd
3,089.0	2,960.7	3,089.0	2,960.7	2.9	2.9	-78.56	73.0	474.2	0.2	-3.1	3.33	0.071	Collision RiskProcedures Req'd
3,100.0	2,968.6	3,100.0	2,968.7	3.0	3.0	-121.99	74.6	481.6	0.3	-3.2	3.54	0.083	Collision RiskProcedures Req'd
3,103.0	2,970.7	3,103.0	2,970.8	3.0	3.0	-131.66	75.0	483.7	0.3	-3.2	3.51	0.094	Collision RiskProcedures Req'd
3,128.0	2,987.9	3,128.0	2,988.6	3.0	3.0	-171.55	78.6	501.0	0.9	-2.4	3.37	0.276	Collision RiskProcedures Req'd
3,150.0	3,002.4	3,150.0	3,003.7	3.1	3.1	176.50	81.7	516.6	1.8	-1.9	3.64	0.490	Collision RiskProcedures Req'd
3,153.0	3,004.4	3,153.0	3,005.8	3.1	3.1	175.43	82.2	518.7	1.9	-1.8	3.69	0.521	Collision RiskProcedures Req'd
3,178.0	3,020.1	3,178.1	3,022.5	3.2	3.1	168.30	85.5	537.1	3.2	-1.0	4.20	0.765	Collision RiskProcedures Req'd
3,200.0	3,033.3	3,200.1	3,036.7	3.2	3.2	163.65	88.4	553.7	4.6	-0.1	4.70	0.970	Collision RiskProcedures Req'd
3,203.0	3,035.0	3,203.1	3,038.6	3.3	3.2	163.10	88.8	556.0	4.8	0.0	4.78	0.997	Collision RiskProcedures Req'd
3,228.0	3,049.2	3,228.2	3,054.0	3.3	3.3	159.17	91.9	575.5	6.6	1.2	5.38	1.225	Collision RiskProcedures Req'd
3,250.0	3,060.9	3,250.3	3,067.1	3.4	3.3	156.80	94.6	593.2	8.4	2.4	5.96	1.408	Collision RiskProcedures Req'd
3,253.0	3,062.5	3,253.3	3,068.9	3.4	3.3	156.53	95.0	595.6	8.6	2.6	6.04	1.431	Collision RiskProcedures Req'd
3,278.0	3,074.9	3,278.5	3,083.1	3.9	3.7	154.69	98.0	616.1	10.9	4.2	6.72	1.627	Collision RiskProcedures Req'd
3,300.0	3,085.2	3,300.5	3,095.1	4.3	4.2	153.94	100.7	634.4	13.2	6.0	7.27	1.819	Collision RiskProcedures Req'd
3,303.0	3,086.5	3,303.5	3,096.7	4.4	4.2	153.92	101.0	636.9	13.6	6.2	7.35	1.848	Collision RiskProcedures Req'd
3,328.0	3,097.2	3,328.6	3,109.9	4.9	4.7	154.26	104.1	658.0	16.7	8.9	7.86	2.127	
3,350.0	3,105.9	3,350.6	3,121.3	5.3	5.2	155.09	106.8	676.7	19.9	11.6	8.26	2.406	

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

Halliburton

Anticollision Report

Company:	Hilcorp Energy Company	Local Co-ordinate Reference:	Well Allison HZFC UN 123H
Project:	San Juan, NM	TVD Reference:	RKB-MSL= 6644 @ 6644.0usft
Reference Site:	Ignacio Blanco (32N7W9)	MD Reference:	RKB-MSL= 6644 @ 6644.0usft
Site Error:	5.0 usft	North Reference:	Grid
Reference Well:	Allison HZFC UN 123H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral 1 ST2	Database:	EDM 5000.17 Single User Db
Reference Design:	WP1	Offset TVD Reference:	Offset Datum

Offset Design: Ignacio Blanco (32N7W9) - Allison HZFC UN 123H - Lateral 1 - Lateral 1													Offset Site Error: 5.0 usft	
Survey Program: 570-3_MWD, 3664-3_MWD		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Rule Assigned: Distance				Offset Well Error: 1.0 usft	
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)	Separation Factor	Warning	
3,353.0	3,107.0	3,353.7	3,122.8	5.4	5.3	155.25	107.2	679.3	20.3	12.0	8.32	2.444		
3,378.0	3,115.9	3,378.8	3,135.3	5.9	5.8	157.00	110.6	700.8	24.3	15.6	8.70	2.796		
3,400.0	3,122.9	3,401.0	3,146.0	6.4	6.2	158.92	113.9	720.0	28.1	19.2	8.95	3.140		
3,403.0	3,123.8	3,404.1	3,147.4	6.5	6.3	159.19	114.4	722.6	28.7	19.7	8.99	3.188		
3,428.0	3,130.8	3,429.5	3,159.1	7.0	6.8	161.55	118.6	744.8	33.3	24.1	9.25	3.602		
3,450.0	3,136.2	3,451.9	3,168.9	7.5	7.3	163.60	122.5	764.6	37.6	28.2	9.46	3.980		
3,453.0	3,136.8	3,455.0	3,170.2	7.6	7.4	163.88	123.0	767.3	38.3	28.8	9.49	4.032		
3,478.0	3,141.9	3,480.0	3,180.6	8.1	7.9	166.10	127.8	789.6	43.5	33.9	9.67	4.501		
3,500.0	3,145.6	3,501.6	3,189.4	8.6	8.4	167.91	131.9	808.9	48.8	39.0	9.82	4.971		
3,503.0	3,146.0	3,504.5	3,190.6	8.7	8.5	168.14	132.5	811.5	49.6	39.8	9.85	5.036		
3,528.0	3,149.1	3,528.9	3,200.3	9.3	9.0	170.00	137.3	833.3	56.5	46.5	10.02	5.637		
3,550.0	3,151.0	3,549.8	3,208.6	9.8	9.5	171.47	141.6	852.0	63.3	53.1	10.19	6.209		
3,553.0	3,151.2	3,552.6	3,209.8	9.9	9.5	171.67	142.2	854.6	64.3	54.1	10.22	6.287		
3,578.0	3,152.4	3,576.1	3,219.1	10.5	10.0	173.19	147.1	875.5	73.0	62.6	10.42	7.004		
3,592.3	3,152.6	3,589.3	3,224.3	10.8	10.3	174.00	149.9	887.3	78.4	67.9	10.55	7.433		
3,600.0	3,152.6	3,596.9	3,227.3	11.0	10.5	174.47	151.6	894.1	81.4	70.8	10.64	7.651		
3,603.0	3,152.6	3,600.1	3,228.6	11.0	10.6	174.66	152.3	897.0	82.6	71.9	10.68	7.728		
3,628.0	3,152.6	3,627.4	3,238.5	11.6	11.2	175.97	158.2	921.7	91.5	80.5	11.06	8.277		
3,653.0	3,152.7	3,655.7	3,247.5	12.2	11.8	176.96	164.4	947.8	99.4	87.9	11.45	8.677		
3,678.0	3,152.8	3,684.8	3,255.5	12.8	12.4	177.66	170.6	975.0	106.1	94.3	11.78	9.010		
3,700.0	3,152.8	3,710.7	3,261.4	13.3	12.7	178.02	175.9	999.7	111.1	99.1	11.97	9.282		
3,703.0	3,152.8	3,714.3	3,262.1	13.4	12.7	178.06	176.6	1,003.1	111.7	99.7	11.99	9.317		
3,728.0	3,152.9	3,745.2	3,267.6	14.0	13.1	178.25	182.7	1,033.0	116.0	103.9	12.17	9.538		
3,753.0	3,153.0	3,776.3	3,271.3	14.5	13.5	178.07	188.2	1,063.3	119.0	106.6	12.37	9.619		
3,778.0	3,153.0	3,806.6	3,273.5	15.1	13.9	177.38	192.5	1,093.2	120.7	108.1	12.61	9.576		
3,800.0	3,153.1	3,832.0	3,274.3	15.6	14.2	176.38	195.3	1,118.5	121.4	108.6	12.87	9.437		
3,803.0	3,153.1	3,835.3	3,274.3	15.7	14.3	176.23	195.6	1,121.8	121.5	108.6	12.91	9.412		
3,828.0	3,153.2	3,862.4	3,274.4	16.3	14.7	174.89	198.0	1,148.8	121.7	108.4	13.28	9.165		
3,853.0	3,153.2	3,888.7	3,274.1	16.9	15.1	173.36	199.9	1,174.9	121.7	107.9	13.75	8.851		
3,878.0	3,153.3	3,914.9	3,273.4	17.5	15.6	171.60	201.3	1,201.1	121.4	107.1	14.34	8.467		
3,900.0	3,153.4	3,937.3	3,272.6	18.0	16.0	169.93	202.2	1,223.5	121.1	106.1	14.97	8.086		
3,903.0	3,153.4	3,940.3	3,272.4	18.1	16.0	169.69	202.3	1,226.5	121.0	106.0	15.07	8.032		
3,928.0	3,153.4	3,966.3	3,271.2	18.6	16.5	167.53	202.9	1,252.5	120.6	104.6	15.98	7.546		
3,953.0	3,153.5	3,990.4	3,269.8	19.2	16.9	165.45	203.4	1,276.5	120.2	103.2	17.00	7.069		
3,962.1	3,153.5	3,998.5	3,269.4	19.5	17.1	164.75	203.6	1,284.6	120.1	102.7	17.37	6.913		
3,978.0	3,153.6	4,013.1	3,268.8	19.8	17.3	163.52	203.9	1,299.2	120.2	102.2	18.07	6.655		
4,000.0	3,153.6	4,035.3	3,268.0	20.3	17.8	161.70	204.5	1,321.4	120.5	101.4	19.14	6.299		
4,003.0	3,153.6	4,038.3	3,267.9	20.4	17.8	161.46	204.6	1,324.4	120.6	101.3	19.29	6.252		
4,028.0	3,153.7	4,061.0	3,267.3	21.0	18.3	159.75	205.4	1,347.0	121.2	100.7	20.44	5.927		
4,053.0	3,153.8	4,083.5	3,267.2	21.6	18.7	158.29	206.5	1,369.5	122.4	100.8	21.55	5.677		
4,078.0	3,153.8	4,106.2	3,267.5	22.2	19.2	156.89	207.5	1,392.2	124.1	101.4	22.68	5.470		
4,100.0	3,153.9	4,127.5	3,268.1	22.7	19.6	155.68	208.5	1,413.4	125.8	102.1	23.71	5.307		
4,103.0	3,153.9	4,130.4	3,268.2	22.8	19.6	155.53	208.7	1,416.3	126.1	102.2	23.85	5.287		
4,128.0	3,153.9	4,156.1	3,269.0	23.4	20.2	154.23	210.2	1,442.0	128.2	103.1	25.06	5.116		
4,153.0	3,154.0	4,182.1	3,269.5	23.9	20.7	152.93	211.7	1,468.0	130.1	103.8	26.31	4.944		
4,178.0	3,154.1	4,207.6	3,269.6	24.5	21.3	151.44	212.8	1,493.5	131.8	104.1	27.71	4.758		
4,200.0	3,154.1	4,229.7	3,269.6	25.1	21.7	150.25	213.9	1,515.5	133.4	104.5	28.91	4.614		
4,203.0	3,154.1	4,232.7	3,269.6	25.1	21.8	150.10	214.1	1,518.5	133.6	104.5	29.07	4.596		
4,228.0	3,154.2	4,257.9	3,269.9	25.7	22.4	148.97	215.8	1,543.6	135.4	105.0	30.34	4.461		
4,253.0	3,154.3	4,281.7	3,270.2	26.3	22.9	147.97	217.5	1,567.4	137.2	105.6	31.57	4.347		
4,278.0	3,154.3	4,305.3	3,270.5	26.9	23.4	146.86	218.8	1,590.9	139.3	106.4	32.87	4.238		
4,300.0	3,154.4	4,326.1	3,270.7	27.4	23.9	145.80	219.6	1,611.7	141.4	107.3	34.09	4.147		

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

Halliburton

Anticollision Report

Company:	Hilcorp Energy Company	Local Co-ordinate Reference:	Well Allison HZFC UN 123H
Project:	San Juan, NM	TVD Reference:	RKB-MSL= 6644 @ 6644.0usft
Reference Site:	Ignacio Blanco (32N7W9)	MD Reference:	RKB-MSL= 6644 @ 6644.0usft
Site Error:	5.0 usft	North Reference:	Grid
Reference Well:	Allison HZFC UN 123H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral 1 ST2	Database:	EDM 5000.17 Single User Db
Reference Design:	WP1	Offset TVD Reference:	Offset Datum

Offset Design: Ignacio Blanco (32N7W9) - Allison HZFC UN 123H - Lateral 1 - Lateral 1													Offset Site Error:	5.0 usft
Survey Program: 570-3_MWD, 3664-3_MWD													Offset Well Error:	1.0 usft
Reference	Offset	Rule Assigned:												
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
							+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
4,303.0	3,154.4	4,329.1	3,270.7	27.5	23.9	145.64	219.7	1,614.7	141.7	107.4	34.27	4.134		
4,328.0	3,154.5	4,354.1	3,271.1	28.1	24.5	144.42	220.6	1,639.7	144.1	108.4	35.73	4.034		
4,352.6	3,154.5	4,378.7	3,271.5	28.7	25.1	143.35	221.8	1,664.3	146.6	109.5	37.11	3.949		
4,353.0	3,154.5	4,379.1	3,271.5	28.7	25.1	143.33	221.8	1,664.7	146.6	109.5	37.13	3.948		
4,374.3	3,154.5	4,402.1	3,271.9	29.2	25.6	142.41	223.1	1,687.6	148.7	110.3	38.36	3.875		
4,378.0	3,154.5	4,406.4	3,271.9	29.3	25.7	142.25	223.3	1,691.9	149.0	110.4	38.59	3.862		
4,400.0	3,154.4	4,431.2	3,271.8	29.8	26.2	141.28	224.9	1,716.7	150.8	110.8	39.93	3.775		
4,403.0	3,154.4	4,434.6	3,271.7	29.8	26.3	141.15	225.1	1,720.0	151.0	110.8	40.12	3.763		
4,428.0	3,154.3	4,461.9	3,270.9	30.4	27.0	140.03	227.1	1,747.3	152.4	110.8	41.66	3.659		
4,453.0	3,154.1	4,488.1	3,269.9	31.0	27.6	138.95	229.1	1,773.3	153.7	110.5	43.18	3.559		
4,478.0	3,154.0	4,514.0	3,268.7	31.6	28.2	137.87	231.1	1,799.2	154.7	110.0	44.72	3.461		
4,500.0	3,153.9	4,534.9	3,267.8	32.1	28.6	137.07	232.9	1,820.0	155.7	109.8	45.96	3.388		
4,503.0	3,153.9	4,537.8	3,267.8	32.2	28.7	136.98	233.2	1,822.8	155.9	109.8	46.13	3.380		
4,528.0	3,153.8	4,561.6	3,267.2	32.8	29.3	136.25	235.4	1,846.5	157.2	109.8	47.44	3.315		
4,553.0	3,153.7	4,585.7	3,267.0	33.4	29.8	135.67	237.9	1,870.5	158.8	110.1	48.67	3.262		
4,578.0	3,153.5	4,610.2	3,267.1	34.0	30.4	135.16	240.5	1,894.9	160.4	110.5	49.87	3.216		
4,600.0	3,153.4	4,631.8	3,267.2	34.5	30.9	134.78	242.8	1,916.3	161.9	111.0	50.89	3.181		
4,603.0	3,153.4	4,634.7	3,267.3	34.6	31.0	134.73	243.2	1,919.3	162.1	111.1	51.03	3.176		
4,628.0	3,153.3	4,660.2	3,267.5	35.2	31.6	134.29	245.9	1,944.6	163.8	111.5	52.23	3.136		
4,653.0	3,153.2	4,685.8	3,267.3	35.7	32.2	133.73	248.6	1,970.0	165.4	111.9	53.51	3.090		
4,678.0	3,153.1	4,711.3	3,266.9	36.3	32.8	133.07	251.0	1,995.4	166.9	112.0	54.89	3.041		
4,700.0	3,153.0	4,733.5	3,266.3	36.9	33.3	132.43	253.0	2,017.5	168.2	112.1	56.15	2.996		
4,703.0	3,153.0	4,736.6	3,266.2	36.9	33.4	132.33	253.3	2,020.6	168.4	112.1	56.33	2.989		
4,728.0	3,152.8	4,761.8	3,265.3	37.5	34.0	131.51	255.5	2,045.7	169.8	112.0	57.83	2.936		
4,753.0	3,152.7	4,788.3	3,264.1	38.1	34.6	130.65	257.8	2,072.0	171.2	111.7	59.41	2.881		
4,778.0	3,152.6	4,814.9	3,263.0	38.7	35.3	129.86	260.5	2,098.5	172.3	111.3	60.94	2.827		
4,800.0	3,152.5	4,839.0	3,261.9	39.2	35.9	129.22	263.2	2,122.5	173.1	110.8	62.26	2.779		
4,803.0	3,152.5	4,842.4	3,261.8	39.3	35.9	129.14	263.7	2,125.8	173.1	110.7	62.44	2.773		
4,828.0	3,152.4	4,870.7	3,260.5	39.9	36.6	128.52	267.5	2,153.8	173.5	109.7	63.86	2.717		
4,853.0	3,152.2	4,899.5	3,259.1	40.5	37.3	128.03	272.2	2,182.2	173.5	108.3	65.18	2.661		
4,878.0	3,152.1	4,929.2	3,258.0	41.1	38.0	127.83	278.1	2,211.2	172.8	106.5	66.25	2.608		
4,900.0	3,152.0	4,955.2	3,257.3	41.6	38.6	127.96	284.4	2,236.4	171.6	104.7	66.93	2.564		
4,903.0	3,152.0	4,958.3	3,257.3	41.7	38.7	127.99	285.2	2,239.5	171.4	104.4	67.02	2.558		
4,928.0	3,151.9	4,986.0	3,256.7	42.2	39.3	128.35	292.7	2,266.1	169.6	102.0	67.63	2.508		
4,953.0	3,151.8	5,013.5	3,256.2	42.8	40.0	128.87	300.7	2,292.5	167.4	99.3	68.09	2.458		
4,978.0	3,151.7	5,038.2	3,256.0	43.4	40.5	129.48	308.3	2,315.9	165.0	96.4	68.55	2.406		
5,000.0	3,151.6	5,059.7	3,256.1	43.9	41.0	130.15	315.1	2,336.3	162.9	94.1	68.84	2.367		
5,003.0	3,151.5	5,062.6	3,256.1	44.0	41.1	130.26	316.0	2,339.1	162.6	93.8	68.87	2.361		
5,028.0	3,151.4	5,088.0	3,256.6	44.6	41.7	131.23	324.3	2,363.1	160.4	91.4	68.96	2.325		
5,053.0	3,151.3	5,114.9	3,256.8	45.2	42.3	132.25	333.2	2,388.5	157.9	89.0	68.91	2.291		
5,078.0	3,151.2	5,141.9	3,256.5	45.8	42.9	133.21	342.2	2,413.9	155.1	86.2	68.85	2.252		
5,100.0	3,151.1	5,161.9	3,256.2	46.3	43.4	133.90	348.8	2,432.8	152.6	83.5	69.10	2.209		
5,103.0	3,151.1	5,164.6	3,256.2	46.4	43.4	133.99	349.7	2,435.4	152.3	83.2	69.13	2.203		
5,128.0	3,151.0	5,187.6	3,256.0	47.0	44.0	134.76	357.0	2,457.2	149.9	80.5	69.37	2.161		
5,153.0	3,150.8	5,210.7	3,255.9	47.6	44.5	135.51	364.0	2,479.2	147.8	78.2	69.59	2.124		
5,178.0	3,150.7	5,234.2	3,255.9	48.2	45.1	136.26	371.0	2,501.6	146.0	76.2	69.76	2.092		
5,200.0	3,150.6	5,254.9	3,256.0	48.7	45.5	136.92	377.0	2,521.4	144.6	74.7	69.88	2.069		
5,203.0	3,150.6	5,257.8	3,256.0	48.7	45.6	137.01	377.8	2,524.1	144.4	74.5	69.90	2.066		
5,228.0	3,150.5	5,282.2	3,256.2	49.3	46.2	137.77	384.8	2,547.6	143.0	73.0	69.98	2.044		
5,253.0	3,150.4	5,307.2	3,256.3	49.9	46.8	138.49	391.7	2,571.7	141.7	71.6	70.06	2.022		
5,278.0	3,150.2	5,332.3	3,256.2	50.5	47.4	139.14	398.5	2,595.8	140.3	70.1	70.18	1.999 Collision RiskProcedures Req'd		
5,300.0	3,150.1	5,354.6	3,256.0	51.0	47.9	139.65	404.5	2,617.2	139.1	68.8	70.34	1.978 Collision RiskProcedures Req'd		

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

Halliburton

Anticollision Report

Company:	Hilcorp Energy Company	Local Co-ordinate Reference:	Well Allison HZFC UN 123H
Project:	San Juan, NM	TVD Reference:	RKB-MSL= 6644 @ 6644.0usft
Reference Site:	Ignacio Blanco (32N7W9)	MD Reference:	RKB-MSL= 6644 @ 6644.0usft
Site Error:	5.0 usft	North Reference:	Grid
Reference Well:	Allison HZFC UN 123H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral 1 ST2	Database:	EDM 5000.17 Single User Db
Reference Design:	WP1	Offset TVD Reference:	Offset Datum

Offset Design: Ignacio Blanco (32N7W9) - Allison HZFC UN 123H - Lateral 1 - Lateral 1													Offset Site Error: 5.0 usft
Survey Program: 570-3_MWD, 3664-3_MWD							Rule Assigned:						Offset Well Error: 1.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	Offset	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,303.0	3,150.1	5,357.6	3,255.9	51.1	48.0	139.72	405.3	2,620.1	138.9	68.6	70.37	1.975	Collision RiskProcedures Req'd
5,328.0	3,150.0	5,382.9	3,255.4	51.7	48.6	140.19	411.9	2,644.6	137.5	66.9	70.65	1.946	Collision RiskProcedures Req'd
5,353.0	3,149.9	5,407.5	3,254.8	52.3	49.2	140.56	418.2	2,668.4	136.1	65.0	71.05	1.915	Collision RiskProcedures Req'd
5,378.0	3,149.8	5,431.8	3,254.2	52.9	49.7	140.89	424.2	2,691.8	134.7	63.2	71.50	1.884	Collision RiskProcedures Req'd
5,400.0	3,149.7	5,453.1	3,253.6	53.4	50.3	141.15	429.3	2,712.5	133.7	61.8	71.92	1.859	Collision RiskProcedures Req'd
5,403.0	3,149.7	5,456.0	3,253.6	53.5	50.3	141.19	430.0	2,715.3	133.5	61.6	71.98	1.855	Collision RiskProcedures Req'd
5,428.0	3,149.5	5,479.9	3,253.1	54.1	50.9	141.49	435.7	2,738.6	132.5	60.1	72.44	1.829	Collision RiskProcedures Req'd
5,453.0	3,149.4	5,503.9	3,252.9	54.7	51.5	141.85	441.4	2,761.8	131.7	58.9	72.82	1.808	Collision RiskProcedures Req'd
5,478.0	3,149.3	5,528.6	3,252.9	55.2	52.1	142.28	447.3	2,785.9	131.0	57.9	73.10	1.793	Collision RiskProcedures Req'd
5,500.0	3,149.2	5,551.5	3,252.8	55.8	52.6	142.68	452.8	2,808.0	130.4	57.1	73.29	1.779	Collision RiskProcedures Req'd
5,503.0	3,149.2	5,554.6	3,252.8	55.8	52.7	142.73	453.5	2,811.1	130.3	57.0	73.31	1.777	Collision RiskProcedures Req'd
5,528.0	3,149.1	5,580.5	3,252.5	56.4	53.3	143.17	459.8	2,836.2	129.3	55.8	73.53	1.759	Collision RiskProcedures Req'd
5,553.0	3,149.0	5,605.3	3,252.1	57.0	53.9	143.57	465.8	2,860.2	128.3	54.5	73.80	1.739	Collision RiskProcedures Req'd
5,578.0	3,148.8	5,630.0	3,251.7	57.6	54.5	143.94	471.8	2,884.3	127.4	53.3	74.10	1.719	Collision RiskProcedures Req'd
5,600.0	3,148.7	5,651.9	3,251.3	58.1	55.0	144.24	477.0	2,905.5	126.5	52.2	74.38	1.701	Collision RiskProcedures Req'd
5,603.0	3,148.7	5,654.9	3,251.3	58.2	55.1	144.28	477.7	2,908.4	126.4	52.0	74.42	1.699	Collision RiskProcedures Req'd
5,628.0	3,148.6	5,679.9	3,250.9	58.8	55.7	144.69	483.7	2,932.7	125.5	50.9	74.63	1.682	Collision RiskProcedures Req'd
5,653.0	3,148.5	5,704.8	3,250.7	59.4	56.3	145.18	489.8	2,956.9	124.6	49.9	74.73	1.668	Collision RiskProcedures Req'd
5,678.0	3,148.4	5,729.4	3,250.5	60.0	56.9	145.71	495.9	2,980.7	123.8	49.0	74.77	1.655	Collision RiskProcedures Req'd
5,700.0	3,148.3	5,751.0	3,250.4	60.5	57.4	146.16	501.2	3,001.7	123.1	48.3	74.81	1.645	Collision RiskProcedures Req'd
5,703.0	3,148.2	5,754.0	3,250.4	60.6	57.5	146.22	501.9	3,004.5	123.0	48.2	74.82	1.644	Collision RiskProcedures Req'd
5,728.0	3,148.1	5,778.7	3,250.3	61.2	58.1	146.71	507.8	3,028.5	122.3	47.4	74.87	1.633	Collision RiskProcedures Req'd
5,753.0	3,148.0	5,803.5	3,250.2	61.7	58.7	147.18	513.8	3,052.6	121.6	46.7	74.93	1.623	Collision RiskProcedures Req'd
5,778.0	3,147.9	5,828.4	3,250.1	62.3	59.3	147.62	519.6	3,076.8	121.0	46.0	75.02	1.613	Collision RiskProcedures Req'd
5,800.0	3,147.8	5,850.0	3,250.0	62.9	59.8	148.01	524.6	3,097.8	120.5	45.4	75.10	1.605	Collision RiskProcedures Req'd
5,803.0	3,147.8	5,852.9	3,250.0	62.9	59.9	148.06	525.3	3,100.6	120.5	45.4	75.10	1.604	Collision RiskProcedures Req'd
5,828.0	3,147.7	5,877.3	3,250.1	63.5	60.5	148.58	531.1	3,124.3	120.0	45.0	75.06	1.599	Collision RiskProcedures Req'd
5,853.0	3,147.5	5,901.9	3,250.3	64.1	61.1	149.18	537.0	3,148.1	119.7	44.8	74.88	1.599	Collision RiskProcedures Req'd
5,878.0	3,147.4	5,926.8	3,250.8	64.7	61.7	149.89	543.1	3,172.3	119.5	45.0	74.50	1.604	Collision RiskProcedures Req'd
5,900.0	3,147.3	5,948.7	3,251.2	65.2	62.2	150.61	548.7	3,193.5	119.3	45.3	74.01	1.612	Collision RiskProcedures Req'd
5,903.0	3,147.3	5,951.6	3,251.3	65.3	62.3	150.72	549.5	3,196.3	119.3	45.3	73.93	1.613	Collision RiskProcedures Req'd
5,928.0	3,147.2	5,976.7	3,251.9	65.9	62.9	151.60	555.9	3,220.6	119.1	45.8	73.24	1.625	Collision RiskProcedures Req'd
5,953.0	3,147.1	6,001.9	3,252.4	66.5	63.5	152.38	562.2	3,245.0	118.8	46.1	72.70	1.635	Collision RiskProcedures Req'd
5,978.0	3,146.9	6,027.1	3,252.6	67.1	64.2	153.04	568.3	3,269.4	118.6	46.3	72.33	1.640	Collision RiskProcedures Req'd
6,000.0	3,146.8	6,049.2	3,252.7	67.6	64.7	153.46	573.4	3,290.9	118.3	46.1	72.23	1.638	Collision RiskProcedures Req'd
6,003.0	3,146.8	6,052.3	3,252.7	67.7	64.8	153.51	574.1	3,293.9	118.3	46.1	72.23	1.638	Collision RiskProcedures Req'd
6,028.0	3,146.7	6,077.4	3,252.5	68.2	65.4	153.77	579.5	3,318.4	118.0	45.5	72.46	1.628	Collision RiskProcedures Req'd
6,053.0	3,146.6	6,103.0	3,252.1	68.8	66.0	153.84	584.7	3,343.5	117.6	44.6	72.98	1.612	Collision RiskProcedures Req'd
6,078.0	3,146.5	6,128.7	3,251.5	69.4	66.6	153.78	589.7	3,368.6	117.1	43.4	73.70	1.589	Collision RiskProcedures Req'd
6,100.0	3,146.4	6,151.1	3,250.7	69.9	67.2	153.63	594.0	3,390.6	116.5	42.0	74.49	1.564	Collision RiskProcedures Req'd
6,103.0	3,146.4	6,154.0	3,250.6	70.0	67.3	153.61	594.6	3,393.5	116.4	41.8	74.61	1.561	Collision RiskProcedures Req'd
6,128.0	3,146.2	6,178.7	3,249.8	70.6	67.9	153.47	599.3	3,417.7	115.8	40.3	75.48	1.534	Collision RiskProcedures Req'd
6,153.0	3,146.1	6,203.3	3,249.1	71.2	68.5	153.41	604.2	3,441.9	115.3	39.0	76.23	1.512	Collision RiskProcedures Req'd
6,178.0	3,146.0	6,227.4	3,248.7	71.8	69.1	153.41	608.9	3,465.4	114.8	37.9	76.88	1.493	Collision RiskProcedures Req'd
6,200.0	3,145.9	6,248.4	3,248.4	72.3	69.6	153.45	613.1	3,486.0	114.6	37.2	77.39	1.481	Collision RiskProcedures Req'd
6,203.0	3,145.9	6,251.3	3,248.4	72.4	69.7	153.45	613.7	3,488.9	114.6	37.1	77.46	1.480	Collision RiskProcedures Req'd
6,211.0	3,145.8	6,258.9	3,248.4	72.6	69.9	153.47	615.2	3,496.3	114.6	37.0	77.63	1.476	Collision RiskProcedures Req'd
6,228.0	3,145.8	6,275.2	3,248.4	73.0	70.3	153.53	618.4	3,512.3	114.7	36.7	77.97	1.471	Collision RiskProcedures Req'd
6,253.0	3,145.7	6,299.7	3,248.5	73.6	70.9	153.62	623.1	3,536.4	114.9	36.4	78.46	1.464	Collision RiskProcedures Req'd
6,278.0	3,145.5	6,324.3	3,248.8	74.2	71.5	153.68	627.8	3,560.5	115.2	36.2	78.99	1.458	Collision RiskProcedures Req'd
6,300.0	3,145.4	6,346.4	3,249.0	74.7	72.0	153.71	631.9	3,582.2	115.5	36.0	79.50	1.453	Collision RiskProcedures Req'd
6,303.0	3,145.4	6,349.5	3,249.0	74.7	72.1	153.71	632.5	3,585.3	115.5	36.0	79.57	1.452	Collision RiskProcedures Req'd

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

Halliburton

Anticollision Report

Company:	Hilcorp Energy Company	Local Co-ordinate Reference:	Well Allison HZFC UN 123H
Project:	San Juan, NM	TVD Reference:	RKB-MSL= 6644 @ 6644.0usft
Reference Site:	Ignacio Blanco (32N7W9)	MD Reference:	RKB-MSL= 6644 @ 6644.0usft
Site Error:	5.0 usft	North Reference:	Grid
Reference Well:	Allison HZFC UN 123H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral 1 ST2	Database:	EDM 5000.17 Single User Db
Reference Design:	WP1	Offset TVD Reference:	Offset Datum

Offset Design: Ignacio Blanco (32N7W9) - Allison HZFC UN 123H - Lateral 1 - Lateral 1													Offset Site Error: 5.0 usft
Survey Program: 570-3_MWD, 3664-3_MWD							Rule Assigned:						Offset Well Error: 1.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	Offset	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
6,328.0	3,145.3	6,375.4	3,249.1	75.3	72.7	153.70	637.3	3,610.7	115.7	35.5	80.23	1.442	Collision RiskProcedures Req'd
6,353.0	3,145.2	6,401.2	3,248.9	75.9	73.4	153.65	642.2	3,636.0	115.7	34.8	80.97	1.429	Collision RiskProcedures Req'd
6,366.2	3,145.1	6,414.1	3,248.8	76.2	73.7	153.61	644.6	3,648.7	115.7	34.4	81.37	1.422	Collision RiskProcedures Req'd
6,378.0	3,145.1	6,425.7	3,248.7	76.5	74.0	153.59	646.7	3,660.1	115.7	34.0	81.73	1.416	Collision RiskProcedures Req'd
6,400.0	3,145.0	6,447.3	3,248.6	77.0	74.5	153.54	650.8	3,681.4	115.8	33.4	82.38	1.406	Collision RiskProcedures Req'd
6,403.0	3,144.9	6,450.3	3,248.6	77.1	74.6	153.53	651.3	3,684.3	115.8	33.4	82.46	1.405	Collision RiskProcedures Req'd
6,428.0	3,144.8	6,474.9	3,248.6	77.7	75.2	153.47	655.8	3,708.5	116.0	32.8	83.21	1.394	Collision RiskProcedures Req'd
6,453.0	3,144.7	6,499.6	3,248.6	78.3	75.8	153.35	660.2	3,732.8	116.3	32.2	84.08	1.383	Collision RiskProcedures Req'd
6,478.0	3,144.6	6,524.0	3,248.6	78.9	76.4	153.16	664.4	3,756.8	116.6	31.5	85.08	1.370	Collision RiskProcedures Req'd
6,500.0	3,144.5	6,545.5	3,248.6	79.4	77.0	152.95	668.0	3,778.0	116.9	30.9	86.04	1.359	Collision RiskProcedures Req'd
6,503.0	3,144.5	6,548.4	3,248.6	79.5	77.0	152.92	668.4	3,780.8	117.0	30.8	86.17	1.358	Collision RiskProcedures Req'd
6,528.0	3,144.4	6,572.4	3,248.8	80.1	77.6	152.65	672.3	3,804.6	117.7	30.4	87.29	1.348	Collision RiskProcedures Req'd
6,553.0	3,144.2	6,597.6	3,249.2	80.7	78.3	152.37	676.2	3,829.5	118.5	30.0	88.50	1.339	Collision RiskProcedures Req'd
6,578.0	3,144.1	6,624.7	3,249.3	81.3	78.9	152.15	680.8	3,856.2	119.0	29.3	89.62	1.327	Collision RiskProcedures Req'd
6,600.0	3,144.0	6,648.6	3,249.1	81.8	79.5	152.04	685.1	3,879.7	119.0	28.6	90.41	1.316	Collision RiskProcedures Req'd
6,603.0	3,144.0	6,651.9	3,249.1	81.8	79.6	152.03	685.7	3,882.9	119.0	28.5	90.51	1.315	Collision RiskProcedures Req'd
6,628.0	3,143.9	6,679.7	3,248.5	82.4	80.3	152.01	691.3	3,910.1	118.5	27.3	91.17	1.300	Collision RiskProcedures Req'd
6,653.0	3,143.8	6,707.3	3,247.4	83.0	81.0	152.09	697.2	3,937.1	117.5	25.9	91.60	1.282	Collision RiskProcedures Req'd
6,678.0	3,143.6	6,732.7	3,246.2	83.6	81.6	152.33	703.1	3,961.8	116.0	24.3	91.78	1.264	Collision RiskProcedures Req'd
6,700.0	3,143.5	6,754.9	3,245.3	84.1	82.1	152.73	708.7	3,983.2	114.8	23.2	91.54	1.254	Collision RiskProcedures Req'd
6,703.0	3,143.5	6,757.9	3,245.2	84.2	82.2	152.80	709.4	3,986.2	114.6	23.1	91.48	1.253	Collision RiskProcedures Req'd
6,728.0	3,143.4	6,782.8	3,244.4	84.8	82.8	153.51	716.1	4,010.1	113.1	22.4	90.73	1.246	Collision RiskProcedures Req'd
6,753.0	3,143.3	6,807.3	3,243.8	85.4	83.4	154.37	722.8	4,033.6	111.7	22.0	89.67	1.246	Collision RiskProcedures Req'd
6,778.0	3,143.2	6,832.0	3,243.4	86.0	84.0	155.39	729.8	4,057.3	110.4	22.2	88.26	1.251	Collision RiskProcedures Req'd
6,800.0	3,143.1	6,854.1	3,243.1	86.5	84.5	156.33	736.0	4,078.5	109.4	22.4	86.92	1.258	Collision RiskProcedures Req'd
6,803.0	3,143.1	6,857.1	3,243.0	86.6	84.6	156.46	736.9	4,081.5	109.2	22.5	86.74	1.259	Collision RiskProcedures Req'd
6,828.0	3,142.9	6,882.6	3,242.4	87.2	85.2	157.42	743.9	4,106.0	107.9	22.5	85.39	1.263	Collision RiskProcedures Req'd
6,853.0	3,142.8	6,907.0	3,241.6	87.8	85.8	158.27	750.5	4,129.4	106.5	22.2	84.30	1.263	Collision RiskProcedures Req'd
6,878.0	3,142.7	6,930.6	3,241.1	88.3	86.4	159.17	756.9	4,152.1	105.4	22.3	83.14	1.268	Collision RiskProcedures Req'd
6,900.0	3,142.6	6,951.4	3,241.0	88.9	86.9	160.03	762.5	4,172.1	104.8	22.8	81.97	1.278	Collision RiskProcedures Req'd
6,903.0	3,142.6	6,955.0	3,241.0	88.9	87.0	160.18	763.4	4,175.6	104.7	23.0	81.72	1.281	Collision RiskProcedures Req'd
6,928.0	3,142.5	6,977.6	3,241.2	89.5	87.5	161.21	769.6	4,197.4	104.3	24.0	80.30	1.299	Collision RiskProcedures Req'd
6,937.2	3,142.4	6,986.2	3,241.4	89.7	87.7	161.62	771.9	4,205.6	104.3	24.6	79.70	1.309	Collision RiskProcedures Req'd
6,953.0	3,142.4	7,001.0	3,241.8	90.1	88.1	162.36	776.0	4,219.8	104.4	25.8	78.62	1.328	Collision RiskProcedures Req'd
6,978.0	3,142.2	7,024.7	3,242.8	90.7	88.7	163.61	782.5	4,242.6	104.8	28.1	76.77	1.366	Collision RiskProcedures Req'd
7,000.0	3,142.1	7,046.3	3,243.8	91.2	89.2	164.76	788.5	4,263.3	105.4	30.3	75.10	1.404	Collision RiskProcedures Req'd
7,003.0	3,142.1	7,049.2	3,244.0	91.3	89.3	164.91	789.3	4,266.2	105.5	30.6	74.88	1.409	Collision RiskProcedures Req'd
7,028.0	3,142.0	7,073.7	3,245.2	91.9	89.9	166.22	796.0	4,289.7	106.3	33.2	73.07	1.455	Collision RiskProcedures Req'd
7,053.0	3,141.9	7,099.0	3,246.5	92.5	90.5	167.50	802.9	4,314.0	107.2	35.8	71.40	1.501	Collision RiskProcedures Req'd
7,078.0	3,141.8	7,124.6	3,247.6	93.1	91.1	168.64	809.7	4,338.6	107.9	37.9	70.07	1.540	Collision RiskProcedures Req'd
7,100.0	3,141.7	7,147.3	3,248.3	93.6	91.7	169.52	815.5	4,360.6	108.5	39.4	69.16	1.569	Collision RiskProcedures Req'd
7,103.0	3,141.6	7,150.5	3,248.4	93.7	91.7	169.63	816.3	4,363.7	108.6	39.5	69.04	1.573	Collision RiskProcedures Req'd
7,128.0	3,141.5	7,176.9	3,249.0	94.3	92.4	170.52	822.9	4,389.2	108.9	40.7	68.24	1.596	Collision RiskProcedures Req'd
7,153.0	3,141.4	7,203.2	3,249.2	94.9	93.0	171.30	829.4	4,414.7	109.0	41.4	67.64	1.612	Collision RiskProcedures Req'd
7,178.0	3,141.3	7,229.5	3,249.0	95.4	93.7	171.99	835.7	4,440.2	108.8	41.6	67.20	1.619	Collision RiskProcedures Req'd
7,200.0	3,141.2	7,252.6	3,248.6	96.0	94.2	172.53	841.1	4,462.6	108.3	41.4	66.91	1.619	Collision RiskProcedures Req'd
7,203.0	3,141.2	7,255.7	3,248.5	96.0	94.3	172.60	841.9	4,465.7	108.3	41.4	66.88	1.619	Collision RiskProcedures Req'd
7,228.0	3,141.1	7,281.7	3,247.7	96.6	95.0	173.12	847.9	4,491.0	107.5	40.8	66.71	1.611	Collision RiskProcedures Req'd
7,253.0	3,140.9	7,307.7	3,246.6	97.2	95.6	173.47	853.6	4,516.3	106.5	39.8	66.72	1.596	Collision RiskProcedures Req'd
7,278.0	3,140.8	7,332.5	3,245.4	97.8	96.2	173.68	858.9	4,540.6	105.3	38.4	66.92	1.574	Collision RiskProcedures Req'd
7,300.0	3,140.7	7,353.2	3,244.6	98.3	96.7	173.90	863.3	4,560.7	104.5	37.4	67.09	1.558	Collision RiskProcedures Req'd
7,303.0	3,140.7	7,356.0	3,244.5	98.4	96.8	173.93	863.9	4,563.5	104.4	37.3	67.10	1.556	Collision RiskProcedures Req'd

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

Halliburton

Anticollision Report

Company:	Hilcorp Energy Company	Local Co-ordinate Reference:	Well Allison HZFC UN 123H
Project:	San Juan, NM	TVD Reference:	RKB-MSL= 6644 @ 6644.0usft
Reference Site:	Ignacio Blanco (32N7W9)	MD Reference:	RKB-MSL= 6644 @ 6644.0usft
Site Error:	5.0 usft	North Reference:	Grid
Reference Well:	Allison HZFC UN 123H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral 1 ST2	Database:	EDM 5000.17 Single User Db
Reference Design:	WP1	Offset TVD Reference:	Offset Datum

Offset Design: Ignacio Blanco (32N7W9) - Allison HZFC UN 123H - Lateral 1 - Lateral 1													Offset Site Error: 5.0 usft
Survey Program: 570-3_MWD, 3664-3_MWD							Rule Assigned:						Offset Well Error: 1.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
7,328.0	3,140.6	7,379.5	3,243.9	99.0	97.4	174.29	869.1	4,586.4	103.9	36.7	67.19	1.546	Collision RiskProcedures Req'd
7,353.0	3,140.5	7,404.8	3,243.5	99.6	98.0	174.71	874.7	4,611.0	103.5	36.3	67.20	1.541	Collision RiskProcedures Req'd
7,378.0	3,140.4	7,430.5	3,243.0	100.2	98.6	175.04	880.2	4,636.1	103.0	35.7	67.31	1.531	Collision RiskProcedures Req'd
7,400.0	3,140.2	7,453.0	3,242.3	100.7	99.2	175.25	884.9	4,658.1	102.5	35.0	67.48	1.518	Collision RiskProcedures Req'd
7,403.0	3,140.2	7,456.0	3,242.2	100.8	99.3	175.27	885.5	4,661.1	102.4	34.9	67.51	1.516	Collision RiskProcedures Req'd
7,428.0	3,140.1	7,481.4	3,241.3	101.4	99.9	175.43	890.7	4,685.9	101.6	33.8	67.78	1.499	Collision RiskProcedures Req'd
7,453.0	3,140.0	7,506.7	3,240.4	101.9	100.5	175.52	895.8	4,710.7	100.8	32.7	68.10	1.480	Collision RiskProcedures Req'd
7,478.0	3,139.9	7,529.7	3,239.7	102.5	101.1	175.48	900.1	4,733.2	100.1	31.5	68.57	1.460	Collision RiskProcedures Req'd
7,497.1	3,139.8	7,547.2	3,239.4	103.0	101.5	175.32	903.2	4,750.5	100.0	30.9	69.01	1.448	Collision RiskProcedures Req'd
7,500.0	3,139.8	7,549.9	3,239.4	103.1	101.6	175.28	903.7	4,753.1	100.0	30.9	69.08	1.447	Collision RiskProcedures Req'd
7,503.0	3,139.8	7,552.6	3,239.4	103.1	101.7	175.25	904.1	4,755.8	100.0	30.8	69.16	1.445	Collision RiskProcedures Req'd
7,528.0	3,139.6	7,576.4	3,239.5	103.7	102.3	174.81	907.9	4,779.3	100.3	30.4	69.94	1.434	Collision RiskProcedures Req'd
7,553.0	3,139.5	7,602.0	3,239.7	104.3	102.9	174.11	911.6	4,804.7	100.7	29.6	71.03	1.417	Collision RiskProcedures Req'd
7,578.0	3,139.4	7,627.6	3,239.6	104.9	103.6	173.16	914.8	4,830.0	100.9	28.4	72.48	1.392	Collision RiskProcedures Req'd
7,600.0	3,139.3	7,650.0	3,239.4	105.4	104.1	172.20	917.4	4,852.3	101.0	26.9	74.05	1.364	Collision RiskProcedures Req'd
7,603.0	3,139.3	7,653.1	3,239.3	105.5	104.2	172.06	917.8	4,855.3	101.0	26.7	74.28	1.360	Collision RiskProcedures Req'd
7,628.0	3,139.2	7,678.6	3,238.9	106.1	104.8	170.92	920.7	4,880.7	101.0	24.7	76.32	1.323	Collision RiskProcedures Req'd
7,646.6	3,139.1	7,697.0	3,238.5	106.5	105.3	170.07	922.7	4,899.0	100.9	23.0	77.95	1.295	Collision RiskProcedures Req'd
7,653.0	3,139.1	7,703.1	3,238.4	106.7	105.4	169.79	923.4	4,905.0	101.0	22.4	78.52	1.286	Collision RiskProcedures Req'd
7,678.0	3,138.9	7,726.9	3,238.2	107.3	106.0	168.73	926.1	4,928.6	101.2	20.4	80.76	1.253	Collision RiskProcedures Req'd
7,700.0	3,138.8	7,747.8	3,238.2	107.8	106.6	167.83	928.5	4,949.4	101.7	18.9	82.78	1.228	Collision RiskProcedures Req'd
7,703.0	3,138.8	7,752.0	3,238.2	107.9	106.7	167.66	928.9	4,953.6	101.8	18.6	83.18	1.224	Collision RiskProcedures Req'd
7,728.0	3,138.7	7,776.1	3,238.4	108.4	107.3	166.65	931.7	4,977.6	102.5	16.9	85.58	1.197	Collision RiskProcedures Req'd
7,753.0	3,138.6	7,801.7	3,238.3	109.0	107.9	165.58	934.6	5,003.0	103.0	14.8	88.25	1.167	Collision RiskProcedures Req'd
7,778.0	3,138.5	7,827.6	3,238.1	109.6	108.6	164.49	937.6	5,028.7	103.4	12.3	91.09	1.135	Collision RiskProcedures Req'd
7,800.0	3,138.4	7,850.4	3,237.7	110.2	109.2	163.48	940.1	5,051.4	103.6	9.8	93.80	1.104	Collision RiskProcedures Req'd
7,803.0	3,138.3	7,853.6	3,237.6	110.2	109.2	163.33	940.5	5,054.5	103.6	9.4	94.19	1.100	Collision RiskProcedures Req'd
7,828.0	3,138.2	7,879.2	3,236.8	110.8	109.9	162.13	943.3	5,079.9	103.6	6.1	97.49	1.063	Collision RiskProcedures Req'd
7,832.2	3,138.2	7,883.2	3,236.7	110.9	110.0	161.95	943.8	5,083.9	103.6	5.6	98.01	1.057	Collision RiskProcedures Req'd
7,853.0	3,138.1	7,903.4	3,236.2	111.4	110.5	161.10	946.2	5,104.0	103.7	3.2	100.49	1.032	Collision RiskProcedures Req'd
7,878.0	3,138.0	7,927.6	3,235.8	112.0	111.1	160.26	949.3	5,128.0	103.9	0.8	103.10	1.008	Collision RiskProcedures Req'd
7,900.0	3,137.9	7,949.3	3,235.7	112.5	111.6	159.63	952.3	5,149.5	104.3	-0.9	105.16	0.992	Collision RiskProcedures Req'd
7,903.0	3,137.9	7,952.3	3,235.6	112.6	111.7	159.54	952.7	5,152.5	104.4	-1.1	105.44	0.990	Collision RiskProcedures Req'd
7,928.0	3,137.8	7,977.2	3,235.5	113.2	112.3	158.80	956.0	5,177.1	104.8	-3.1	107.88	0.972	Collision RiskProcedures Req'd
7,953.0	3,137.6	8,002.0	3,235.3	113.8	113.0	158.04	959.3	5,201.7	105.3	-5.1	110.42	0.954	Collision RiskProcedures Req'd
7,978.0	3,137.5	8,026.6	3,235.3	114.4	113.6	157.39	962.7	5,226.1	105.9	-6.8	112.70	0.940	Collision RiskProcedures Req'd
8,000.0	3,137.4	8,048.4	3,235.4	114.9	114.1	156.96	965.9	5,247.6	106.5	-7.9	114.36	0.931	Collision RiskProcedures Req'd
8,003.0	3,137.4	8,051.3	3,235.4	115.0	114.2	156.91	966.4	5,250.5	106.6	-8.0	114.56	0.930	Collision RiskProcedures Req'd
8,028.0	3,137.3	8,076.3	3,235.7	115.5	114.8	156.59	970.3	5,275.1	107.3	-8.7	116.02	0.925	Collision RiskProcedures Req'd
8,053.0	3,137.2	8,101.3	3,236.1	116.1	115.4	156.41	974.5	5,299.8	108.0	-9.1	117.10	0.922	Collision RiskProcedures Req'd
8,078.0	3,137.1	8,126.3	3,236.6	116.7	116.1	156.36	978.9	5,324.4	108.7	-9.1	117.84	0.923	Collision RiskProcedures Req'd
8,100.0	3,136.9	8,148.4	3,237.0	117.2	116.6	156.24	982.7	5,346.2	109.3	-9.4	118.70	0.921	Collision RiskProcedures Req'd
8,103.0	3,136.9	8,151.4	3,237.0	117.3	116.7	156.22	983.2	5,349.1	109.4	-9.4	118.85	0.921	Collision RiskProcedures Req'd
8,128.0	3,136.8	8,176.4	3,237.3	117.9	117.3	155.88	987.1	5,373.9	110.1	-10.3	120.40	0.914	Collision RiskProcedures Req'd
8,153.0	3,136.7	8,201.6	3,237.3	118.5	118.0	155.36	990.8	5,398.7	110.7	-11.7	122.43	0.904	Collision RiskProcedures Req'd
8,178.0	3,136.6	8,226.7	3,237.3	119.1	118.6	154.72	994.2	5,423.6	111.4	-13.5	124.85	0.892	Collision RiskProcedures Req'd
8,200.0	3,136.5	8,248.8	3,237.1	119.6	119.1	154.06	997.1	5,445.6	111.9	-15.4	127.27	0.879	Collision RiskProcedures Req'd
8,203.0	3,136.5	8,251.9	3,237.1	119.7	119.2	153.97	997.5	5,448.6	112.0	-15.6	127.60	0.878	Collision RiskProcedures Req'd
8,228.0	3,136.3	8,277.4	3,236.9	120.3	119.9	153.36	1,001.0	5,473.9	112.5	-17.5	130.01	0.866	Collision RiskProcedures Req'd
8,253.0	3,136.2	8,302.9	3,236.8	120.9	120.5	152.94	1,005.0	5,499.1	112.9	-18.9	131.87	0.856	Collision RiskProcedures Req'd
8,278.0	3,136.1	8,327.7	3,236.7	121.5	121.1	152.58	1,008.9	5,523.5	113.3	-20.2	133.57	0.848	Collision RiskProcedures Req'd
8,300.0	3,136.0	8,349.4	3,236.5	122.0	121.7	152.15	1,012.2	5,545.1	113.7	-21.7	135.37	0.840	Collision RiskProcedures Req'd

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

Halliburton

Anticollision Report

Company:	Hilcorp Energy Company	Local Co-ordinate Reference:	Well Allison HZFC UN 123H
Project:	San Juan, NM	TVD Reference:	RKB-MSL= 6644 @ 6644.0usft
Reference Site:	Ignacio Blanco (32N7W9)	MD Reference:	RKB-MSL= 6644 @ 6644.0usft
Site Error:	5.0 usft	North Reference:	Grid
Reference Well:	Allison HZFC UN 123H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral 1 ST2	Database:	EDM 5000.17 Single User Db
Reference Design:	WP1	Offset TVD Reference:	Offset Datum

Offset Design: Ignacio Blanco (32N7W9) - Allison HZFC UN 123H - Lateral 1 - Lateral 1													Offset Site Error: 5.0 usft	
Survey Program: 570-3_MWD, 3664-3_MWD				Rule Assigned:					Offset Well Error: 1.0 usft					
Reference		Offset		Semi Major Axis		Offset Wellbore Centre			Distance		Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
8,303.0	3,136.0	8,352.4	3,236.5	122.0	121.7	152.09	1,012.6	5,548.0	113.8	-21.9	135.64	0.839	Collision RiskProcedures Req'd	
8,328.0	3,135.9	8,377.6	3,236.3	122.6	122.4	151.53	1,016.2	5,572.9	114.3	-23.7	137.95	0.828	Collision RiskProcedures Req'd	
8,353.0	3,135.8	8,403.3	3,236.3	123.2	123.0	151.27	1,020.5	5,598.2	114.6	-24.7	139.38	0.822	Collision RiskProcedures Req'd	
8,378.0	3,135.6	8,429.1	3,236.5	123.8	123.7	151.40	1,025.6	5,623.5	114.8	-24.8	139.68	0.822	Collision RiskProcedures Req'd	
8,400.0	3,135.5	8,452.4	3,236.7	124.3	124.2	151.77	1,030.7	5,646.3	114.8	-24.4	139.18	0.825	Collision RiskProcedures Req'd	
8,403.0	3,135.5	8,455.6	3,236.7	124.4	124.3	151.84	1,031.4	5,649.4	114.8	-24.3	139.07	0.826	Collision RiskProcedures Req'd	
8,428.0	3,135.4	8,482.1	3,236.9	125.0	125.0	152.52	1,037.8	5,675.1	114.4	-23.3	137.70	0.831	Collision RiskProcedures Req'd	
8,453.0	3,135.3	8,507.7	3,236.9	125.6	125.6	153.31	1,044.3	5,699.8	113.8	-22.2	135.99	0.837	Collision RiskProcedures Req'd	
8,478.0	3,135.2	8,533.1	3,236.8	126.2	126.2	154.02	1,050.7	5,724.4	113.1	-21.3	134.48	0.841	Collision RiskProcedures Req'd	
8,500.0	3,135.1	8,555.7	3,236.6	126.7	126.8	154.60	1,056.4	5,746.4	112.5	-20.8	133.29	0.844	Collision RiskProcedures Req'd	
8,503.0	3,135.0	8,558.9	3,236.5	126.8	126.9	154.67	1,057.2	5,749.5	112.4	-20.8	133.14	0.844	Collision RiskProcedures Req'd	
8,528.0	3,134.9	8,585.5	3,235.8	127.4	127.5	155.20	1,063.6	5,775.2	111.3	-20.9	132.13	0.842	Collision RiskProcedures Req'd	
8,553.0	3,134.8	8,611.9	3,234.6	128.0	128.2	155.55	1,069.9	5,800.9	109.8	-21.7	131.58	0.835	Collision RiskProcedures Req'd	
8,578.0	3,134.7	8,637.2	3,233.1	128.6	128.8	155.81	1,075.8	5,825.4	108.2	-23.2	131.39	0.823	Collision RiskProcedures Req'd	
8,600.0	3,134.6	8,659.5	3,231.8	129.1	129.3	156.01	1,081.0	5,847.0	106.7	-24.6	131.31	0.813	Collision RiskProcedures Req'd	
8,603.0	3,134.6	8,662.5	3,231.6	129.1	129.4	156.03	1,081.7	5,850.0	106.5	-24.8	131.30	0.811	Collision RiskProcedures Req'd	
8,628.0	3,134.5	8,687.7	3,230.0	129.7	130.0	156.24	1,087.6	5,874.5	104.7	-26.6	131.27	0.798	Collision RiskProcedures Req'd	
8,653.0	3,134.3	8,712.9	3,228.3	130.3	130.7	156.48	1,093.5	5,898.8	102.8	-28.3	131.11	0.784	Collision RiskProcedures Req'd	
8,678.0	3,134.2	8,737.7	3,226.7	130.9	131.3	156.78	1,099.4	5,922.8	101.0	-29.9	130.83	0.772	Collision RiskProcedures Req'd	
8,700.0	3,134.1	8,758.2	3,225.6	131.4	131.8	157.15	1,104.4	5,942.7	99.5	-30.8	130.34	0.763	Collision RiskProcedures Req'd	
8,703.0	3,134.1	8,761.0	3,225.5	131.5	131.8	157.21	1,105.1	5,945.4	99.3	-30.9	130.23	0.763	Collision RiskProcedures Req'd, ES	
8,728.0	3,134.0	8,784.4	3,224.8	132.1	132.4	157.86	1,111.0	5,968.0	98.1	-30.8	128.95	0.761	Collision RiskProcedures Req'd	
8,753.0	3,133.9	8,808.9	3,224.4	132.7	133.0	158.73	1,117.4	5,991.8	97.2	-29.7	126.94	0.766	Collision RiskProcedures Req'd	
8,778.0	3,133.8	8,834.3	3,223.9	133.3	133.6	159.61	1,123.9	6,016.3	96.3	-28.6	124.85	0.771	Collision RiskProcedures Req'd	
8,800.0	3,133.6	8,855.0	3,223.4	133.8	134.1	160.30	1,129.2	6,036.3	95.4	-27.9	123.33	0.773	Collision RiskProcedures Req'd	
8,803.0	3,133.6	8,859.3	3,223.3	133.9	134.2	160.45	1,130.3	6,040.4	95.3	-27.7	122.91	0.775	Collision RiskProcedures Req'd	
8,828.0	3,133.5	8,882.4	3,223.1	134.5	134.8	161.39	1,136.4	6,062.7	94.5	-26.2	120.75	0.783	Collision RiskProcedures Req'd	
8,849.3	3,133.4	8,902.0	3,223.3	135.0	135.3	162.39	1,141.7	6,081.6	94.3	-24.0	118.31	0.797	Collision RiskProcedures Req'd	
8,853.0	3,133.4	8,905.4	3,223.4	135.1	135.4	162.58	1,142.6	6,084.9	94.3	-23.5	117.84	0.801	Collision RiskProcedures Req'd	
8,878.0	3,133.3	8,929.7	3,224.3	135.6	136.0	164.06	1,149.5	6,108.2	94.6	-19.6	114.22	0.828	Collision RiskProcedures Req'd	
8,900.0	3,133.2	8,952.3	3,224.9	136.2	136.5	165.39	1,155.8	6,129.9	94.8	-16.2	111.05	0.854	Collision RiskProcedures Req'd	
8,903.0	3,133.2	8,955.4	3,225.0	136.2	136.6	165.57	1,156.7	6,132.8	94.8	-15.8	110.64	0.857	Collision RiskProcedures Req'd	
8,928.0	3,133.0	8,981.2	3,225.5	136.8	137.2	167.02	1,163.8	6,157.6	94.9	-12.5	107.43	0.883	Collision RiskProcedures Req'd	
8,953.0	3,132.9	9,007.8	3,225.6	137.4	137.9	168.32	1,171.0	6,183.2	94.7	-10.1	104.75	0.904	Collision RiskProcedures Req'd	
8,978.0	3,132.8	9,034.4	3,225.2	138.0	138.5	169.39	1,177.9	6,208.9	94.0	-8.7	102.76	0.915	Collision RiskProcedures Req'd	
9,000.0	3,132.7	9,057.3	3,224.4	138.5	139.1	170.13	1,183.6	6,231.0	93.2	-8.3	101.52	0.918	Collision RiskProcedures Req'd	
9,003.0	3,132.7	9,060.4	3,224.3	138.6	139.2	170.23	1,184.4	6,234.0	93.0	-8.3	101.37	0.918	Collision RiskProcedures Req'd	
9,028.0	3,132.6	9,086.1	3,223.1	139.2	139.8	170.95	1,190.6	6,259.0	91.8	-8.5	100.31	0.916	Collision RiskProcedures Req'd	
9,053.0	3,132.5	9,111.7	3,221.7	139.8	140.4	171.57	1,196.7	6,283.8	90.4	-9.1	99.53	0.909	Collision RiskProcedures Req'd	
9,078.0	3,132.3	9,137.0	3,220.2	140.4	141.1	172.14	1,202.6	6,308.4	88.9	-10.0	98.89	0.899	Collision RiskProcedures Req'd	
9,100.0	3,132.2	9,159.3	3,218.8	140.9	141.6	172.63	1,207.7	6,330.0	87.5	-10.9	98.39	0.889	Collision RiskProcedures Req'd	
9,103.0	3,132.2	9,162.4	3,218.6	141.0	141.7	172.70	1,208.4	6,333.0	87.3	-11.0	98.33	0.888	Collision RiskProcedures Req'd	
9,128.0	3,132.1	9,186.1	3,217.2	141.6	142.3	173.21	1,213.9	6,356.0	85.8	-12.2	98.00	0.876	Collision RiskProcedures Req'd	
9,153.0	3,132.0	9,209.9	3,216.1	142.2	142.9	173.71	1,219.3	6,379.2	84.7	-13.0	97.70	0.867	Collision RiskProcedures Req'd	
9,178.0	3,131.9	9,233.4	3,215.3	142.7	143.4	174.19	1,224.5	6,402.1	83.9	-13.6	97.47	0.861	Collision RiskProcedures Req'd	
9,199.6	3,131.8	9,253.2	3,215.1	143.3	143.9	174.58	1,228.9	6,421.4	83.7	-13.6	97.31	0.860	Collision RiskProcedures Req'd	
9,200.0	3,131.8	9,253.6	3,215.1	143.3	143.9	174.59	1,229.0	6,421.8	83.7	-13.6	97.31	0.860	Collision RiskProcedures Req'd	
9,203.0	3,131.8	9,256.4	3,215.1	143.3	144.0	174.64	1,229.6	6,424.5	83.7	-13.6	97.29	0.860	Collision RiskProcedures Req'd	
9,228.0	3,131.6	9,279.4	3,215.4	143.9	144.6	175.07	1,234.6	6,446.9	84.1	-13.1	97.12	0.865	Collision RiskProcedures Req'd	
9,253.0	3,131.5	9,304.6	3,216.0	144.5	145.2	175.48	1,239.9	6,471.6	84.8	-12.3	97.05	0.873	Collision RiskProcedures Req'd	
9,278.0	3,131.4	9,330.4	3,216.4	145.1	145.8	175.80	1,245.3	6,496.8	85.3	-11.9	97.12	0.878	Collision RiskProcedures Req'd	
9,300.0	3,131.3	9,353.0	3,216.6	145.6	146.4	176.00	1,249.9	6,519.0	85.5	-11.8	97.28	0.879	Collision RiskProcedures Req'd	

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

Halliburton

Anticollision Report

Company:	Hilcorp Energy Company	Local Co-ordinate Reference:	Well Allison HZFC UN 123H
Project:	San Juan, NM	TVD Reference:	RKB-MSL= 6644 @ 6644.0usft
Reference Site:	Ignacio Blanco (32N7W9)	MD Reference:	RKB-MSL= 6644 @ 6644.0usft
Site Error:	5.0 usft	North Reference:	Grid
Reference Well:	Allison HZFC UN 123H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral 1 ST2	Database:	EDM 5000.17 Single User Db
Reference Design:	WP1	Offset TVD Reference:	Offset Datum

Offset Design: Ignacio Blanco (32N7W9) - Allison HZFC UN 123H - Lateral 1 - Lateral 1													Offset Site Error: 5.0 usft
Survey Program: 570-3_MWD, 3664-3_MWD							Rule Assigned:						Offset Well Error: 1.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	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
9,303.0	3,131.3	9,356.1	3,216.6	145.7	146.5	176.01	1,250.5	6,522.0	85.5	-11.8	97.31	0.879	Collision RiskProcedures Req'd
9,328.0	3,131.2	9,381.7	3,216.6	146.3	147.1	176.01	1,255.4	6,547.1	85.6	-12.1	97.72	0.876	Collision RiskProcedures Req'd
9,353.0	3,131.0	9,407.3	3,216.3	146.9	147.8	175.77	1,259.9	6,572.3	85.5	-12.8	98.37	0.869	Collision RiskProcedures Req'd
9,378.0	3,130.9	9,432.8	3,215.9	147.5	148.4	175.41	1,264.3	6,597.4	85.3	-13.9	99.17	0.860	Collision RiskProcedures Req'd
9,400.0	3,130.8	9,455.2	3,215.4	148.0	149.0	175.06	1,268.1	6,619.4	85.0	-15.0	99.93	0.850	Collision RiskProcedures Req'd
9,403.0	3,130.8	9,458.2	3,215.4	148.1	149.0	175.01	1,268.6	6,622.5	84.9	-15.1	100.04	0.849	Collision RiskProcedures Req'd
9,428.0	3,130.7	9,483.5	3,214.7	148.7	149.7	174.60	1,272.9	6,647.4	84.4	-16.6	100.98	0.836	Collision RiskProcedures Req'd
9,453.0	3,130.6	9,508.8	3,214.0	149.3	150.3	174.23	1,277.2	6,672.3	83.8	-18.1	101.91	0.823	Collision RiskProcedures Req'd
9,478.0	3,130.5	9,534.1	3,213.1	149.8	150.9	173.88	1,281.6	6,697.2	83.2	-19.6	102.82	0.809	Collision RiskProcedures Req'd
9,500.0	3,130.4	9,556.5	3,212.3	150.4	151.5	173.53	1,285.5	6,719.2	82.5	-21.2	103.72	0.796	Collision RiskProcedures Req'd
9,503.0	3,130.3	9,559.5	3,212.2	150.4	151.6	173.48	1,286.0	6,722.2	82.4	-21.4	103.85	0.794	Collision RiskProcedures Req'd
9,528.0	3,130.2	9,584.9	3,211.1	151.0	152.2	172.98	1,290.2	6,747.2	81.5	-23.6	105.09	0.776	Collision RiskProcedures Req'd
9,553.0	3,130.1	9,609.8	3,209.9	151.6	152.8	172.45	1,294.4	6,771.8	80.6	-25.9	106.46	0.757	Collision RiskProcedures Req'd
9,574.3	3,130.0	9,631.1	3,209.0	152.1	153.4	171.98	1,297.9	6,792.7	79.8	-27.9	107.69	0.741	Collision RiskProcedures Req'd

Halliburton

Anticollision Report

Company:	Hilcorp Energy Company	Local Co-ordinate Reference:	Well Allison HZFC UN 123H
Project:	San Juan, NM	TVD Reference:	RKB-MSL= 6644 @ 6644.0usft
Reference Site:	Ignacio Blanco (32N7W9)	MD Reference:	RKB-MSL= 6644 @ 6644.0usft
Site Error:	5.0 usft	North Reference:	Grid
Reference Well:	Allison HZFC UN 123H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral 1 ST2	Database:	EDM 5000.17 Single User Db
Reference Design:	WP1	Offset TVD Reference:	Offset Datum

Offset Design: Ignacio Blanco (32N7W9) - Allison HZFC UN 123H - Lateral 1 ST1 - Lateral 1 ST1													Offset Site Error: 5.0 usft
Survey Program: 570-3_MWD, 3664-3_MWD, 4514-3_MWD													Offset Well Error: 1.0 usft
Reference	Offset	Semi Major Axis		Distance		Rule Assigned:		Warning					
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
3,030.7	2,917.6	3,030.7	2,917.6	0.3	0.1	-42.90	64.2	436.0	0.0	-2.2	2.23	0.000	Collision RiskProcedures Req'd, CC, S
3,053.0	2,934.2	3,053.0	2,934.2	2.9	1.2	-43.43	67.6	450.5	0.1	-2.4	2.48	0.030	Collision RiskProcedures Req'd
3,068.0	2,945.4	3,068.0	2,945.3	2.9	1.9	-43.78	69.9	460.3	0.2	-2.5	2.72	0.069	Collision RiskProcedures Req'd
3,078.0	2,952.8	3,078.0	2,952.7	2.9	2.4	-51.08	71.4	466.9	0.2	-2.7	2.94	0.082	Collision RiskProcedures Req'd
3,089.0	2,960.7	3,089.0	2,960.7	2.9	2.9	-78.56	73.0	474.2	0.2	-3.1	3.33	0.071	Collision RiskProcedures Req'd
3,100.0	2,968.6	3,100.0	2,968.7	3.0	3.0	-121.99	74.6	481.6	0.3	-3.2	3.54	0.083	Collision RiskProcedures Req'd, ES
3,103.0	2,970.7	3,103.0	2,970.8	3.0	3.0	-131.66	75.0	483.7	0.3	-3.2	3.51	0.094	Collision RiskProcedures Req'd
3,128.0	2,987.9	3,128.0	2,988.6	3.0	3.0	-171.55	78.6	501.0	0.9	-2.4	3.37	0.276	Collision RiskProcedures Req'd
3,150.0	3,002.4	3,150.0	3,003.7	3.1	3.1	176.50	81.7	516.6	1.8	-1.9	3.64	0.490	Collision RiskProcedures Req'd
3,153.0	3,004.4	3,153.0	3,005.8	3.1	3.1	175.43	82.2	518.7	1.9	-1.8	3.69	0.521	Collision RiskProcedures Req'd
3,178.0	3,020.1	3,178.1	3,022.5	3.2	3.1	168.30	85.5	537.1	3.2	-1.0	4.20	0.765	Collision RiskProcedures Req'd
3,200.0	3,033.3	3,200.1	3,036.7	3.2	3.2	163.65	88.4	553.7	4.6	-0.1	4.70	0.970	Collision RiskProcedures Req'd
3,203.0	3,035.0	3,203.1	3,038.6	3.3	3.2	163.10	88.8	556.0	4.8	0.0	4.78	0.997	Collision RiskProcedures Req'd
3,228.0	3,049.2	3,228.2	3,054.0	3.3	3.3	159.17	91.9	575.5	6.6	1.2	5.38	1.225	Collision RiskProcedures Req'd
3,250.0	3,060.9	3,250.3	3,067.1	3.4	3.3	156.80	94.6	593.2	8.4	2.4	5.96	1.408	Collision RiskProcedures Req'd
3,253.0	3,062.5	3,253.3	3,068.9	3.4	3.3	156.53	95.0	595.6	8.6	2.6	6.04	1.431	Collision RiskProcedures Req'd
3,278.0	3,074.9	3,278.5	3,083.1	3.9	3.7	154.69	98.0	616.1	10.9	4.2	6.72	1.627	Collision RiskProcedures Req'd
3,300.0	3,085.2	3,300.5	3,095.1	4.3	4.2	153.94	100.7	634.4	13.2	6.0	7.27	1.819	Collision RiskProcedures Req'd
3,303.0	3,086.5	3,303.5	3,096.7	4.4	4.2	153.92	101.0	636.9	13.6	6.2	7.35	1.848	Collision RiskProcedures Req'd
3,328.0	3,097.2	3,328.6	3,109.9	4.9	4.7	154.26	104.1	658.0	16.7	8.9	7.86	2.127	
3,350.0	3,105.9	3,350.6	3,121.3	5.3	5.2	155.09	106.8	676.7	19.9	11.6	8.26	2.406	
3,353.0	3,107.0	3,353.7	3,122.8	5.4	5.3	155.25	107.2	679.3	20.3	12.0	8.32	2.444	
3,378.0	3,115.9	3,378.8	3,135.3	5.9	5.8	157.00	110.6	700.8	24.3	15.6	8.70	2.796	
3,400.0	3,122.9	3,401.0	3,146.0	6.4	6.2	158.92	113.9	720.0	28.1	19.2	8.95	3.140	
3,403.0	3,123.8	3,404.1	3,147.4	6.5	6.3	159.19	114.4	722.6	28.7	19.7	8.99	3.188	
3,428.0	3,130.8	3,429.5	3,159.1	7.0	6.8	161.55	118.6	744.8	33.3	24.1	9.25	3.602	
3,450.0	3,136.2	3,451.9	3,168.9	7.5	7.3	163.60	122.5	764.6	37.6	28.2	9.46	3.980	
3,453.0	3,136.8	3,455.0	3,170.2	7.6	7.4	163.88	123.0	767.3	38.3	28.8	9.49	4.032	
3,478.0	3,141.9	3,480.0	3,180.6	8.1	7.9	166.10	127.8	789.6	43.5	33.9	9.67	4.501	
3,500.0	3,145.6	3,501.6	3,189.4	8.6	8.4	167.91	131.9	808.9	48.8	39.0	9.82	4.971	
3,503.0	3,146.0	3,504.5	3,190.6	8.7	8.5	168.14	132.5	811.5	49.6	39.8	9.85	5.036	
3,528.0	3,149.1	3,528.9	3,200.3	9.3	9.0	170.00	137.3	833.3	56.5	46.5	10.02	5.637	
3,550.0	3,151.0	3,549.8	3,208.6	9.8	9.5	171.47	141.6	852.0	63.3	53.1	10.19	6.209	
3,553.0	3,151.2	3,552.6	3,209.8	9.9	9.5	171.67	142.2	854.6	64.3	54.1	10.22	6.287	
3,578.0	3,152.4	3,576.1	3,219.1	10.5	10.0	173.19	147.1	875.5	73.0	62.6	10.42	7.004	
3,592.3	3,152.6	3,589.3	3,224.3	10.8	10.3	174.00	149.9	887.3	78.4	67.9	10.55	7.433	
3,600.0	3,152.6	3,596.9	3,227.3	11.0	10.5	174.47	151.6	894.1	81.4	70.8	10.64	7.651	
3,603.0	3,152.6	3,600.1	3,228.6	11.0	10.6	174.66	152.3	897.0	82.6	71.9	10.68	7.728	
3,628.0	3,152.6	3,627.4	3,238.5	11.6	11.2	175.97	158.2	921.7	91.5	80.5	11.06	8.277	
3,653.0	3,152.7	3,655.7	3,247.5	12.2	11.8	176.96	164.4	947.8	99.4	87.9	11.45	8.677	
3,678.0	3,152.8	3,684.8	3,255.5	12.8	12.4	177.66	170.6	975.0	106.1	94.3	11.78	9.010	
3,700.0	3,152.8	3,710.7	3,261.4	13.3	12.7	178.02	175.9	999.7	111.1	99.1	11.97	9.282	
3,703.0	3,152.8	3,714.3	3,262.1	13.4	12.7	178.06	176.6	1,003.1	111.7	99.7	11.99	9.317	
3,728.0	3,152.9	3,745.2	3,267.6	14.0	13.1	178.25	182.7	1,033.0	116.0	103.9	12.17	9.538	
3,753.0	3,153.0	3,776.3	3,271.3	14.5	13.5	178.07	188.2	1,063.3	119.0	106.6	12.37	9.619	
3,778.0	3,153.0	3,806.6	3,273.5	15.1	13.9	177.38	192.5	1,093.2	120.7	108.1	12.61	9.576	
3,800.0	3,153.1	3,832.0	3,274.3	15.6	14.2	176.38	195.3	1,118.5	121.4	108.6	12.87	9.437	
3,803.0	3,153.1	3,835.3	3,274.3	15.7	14.3	176.23	195.6	1,121.8	121.5	108.6	12.91	9.412	
3,828.0	3,153.2	3,862.4	3,274.4	16.3	14.7	174.89	198.0	1,148.8	121.7	108.4	13.28	9.165	
3,853.0	3,153.2	3,888.7	3,274.1	16.9	15.1	173.36	199.9	1,174.9	121.7	107.9	13.75	8.851	
3,878.0	3,153.3	3,914.9	3,273.4	17.5	15.6	171.60	201.3	1,201.1	121.4	107.1	14.34	8.467	
3,900.0	3,153.4	3,937.3	3,272.6	18.0	16.0	169.93	202.2	1,223.5	121.1	106.1	14.97	8.086	

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

Halliburton

Anticollision Report

Company:	Hilcorp Energy Company	Local Co-ordinate Reference:	Well Allison HZFC UN 123H
Project:	San Juan, NM	TVD Reference:	RKB-MSL= 6644 @ 6644.0usft
Reference Site:	Ignacio Blanco (32N7W9)	MD Reference:	RKB-MSL= 6644 @ 6644.0usft
Site Error:	5.0 usft	North Reference:	Grid
Reference Well:	Allison HZFC UN 123H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral 1 ST2	Database:	EDM 5000.17 Single User Db
Reference Design:	WP1	Offset TVD Reference:	Offset Datum

Offset Design: Ignacio Blanco (32N7W9) - Allison HZFC UN 123H - Lateral 1 ST1 - Lateral 1 ST1													Offset Site Error:	5.0 usft
Survey Program: 570-3_MWD, 3664-3_MWD, 4514-3_MWD													Offset Well Error:	1.0 usft
Reference	Offset	Semi Major Axis	Rule Assigned:											
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
							+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
3,903.0	3,153.4	3,940.3	3,272.4	18.1	16.0	169.69	202.3	1,226.5	121.0	106.0	15.07	8.032		
3,928.0	3,153.4	3,966.3	3,271.2	18.6	16.5	167.53	202.9	1,252.5	120.6	104.6	15.98	7.546		
3,953.0	3,153.5	3,990.4	3,269.8	19.2	16.9	165.45	203.4	1,276.5	120.2	103.2	17.00	7.069		
3,962.1	3,153.5	3,998.5	3,269.4	19.5	17.1	164.75	203.6	1,284.6	120.1	102.7	17.37	6.913		
3,978.0	3,153.6	4,013.1	3,268.8	19.8	17.3	163.52	203.9	1,299.2	120.2	102.2	18.07	6.655		
4,000.0	3,153.6	4,035.3	3,268.0	20.3	17.8	161.70	204.5	1,321.4	120.5	101.4	19.14	6.299		
4,003.0	3,153.6	4,038.3	3,267.9	20.4	17.8	161.46	204.6	1,324.4	120.6	101.3	19.29	6.252		
4,028.0	3,153.7	4,061.0	3,267.3	21.0	18.3	159.75	205.4	1,347.0	121.2	100.7	20.44	5.927		
4,053.0	3,153.8	4,083.5	3,267.2	21.6	18.7	158.29	206.5	1,369.5	122.4	100.8	21.55	5.677		
4,078.0	3,153.8	4,106.2	3,267.5	22.2	19.2	156.89	207.5	1,392.2	124.1	101.4	22.68	5.470		
4,100.0	3,153.9	4,127.5	3,268.1	22.7	19.6	155.68	208.5	1,413.4	125.8	102.1	23.71	5.307		
4,103.0	3,153.9	4,130.4	3,268.2	22.8	19.6	155.53	208.7	1,416.3	126.1	102.2	23.85	5.287		
4,128.0	3,153.9	4,156.1	3,269.0	23.4	20.2	154.23	210.2	1,442.0	128.2	103.1	25.06	5.116		
4,153.0	3,154.0	4,182.1	3,269.5	23.9	20.7	152.93	211.7	1,468.0	130.1	103.8	26.31	4.944		
4,178.0	3,154.1	4,207.6	3,269.6	24.5	21.3	151.44	212.8	1,493.5	131.8	104.1	27.71	4.758		
4,200.0	3,154.1	4,229.7	3,269.6	25.1	21.7	150.25	213.9	1,515.5	133.4	104.5	28.91	4.614		
4,203.0	3,154.1	4,232.7	3,269.6	25.1	21.8	150.10	214.1	1,518.5	133.6	104.5	29.07	4.596		
4,228.0	3,154.2	4,257.9	3,269.9	25.7	22.4	148.97	215.8	1,543.6	135.4	105.0	30.34	4.461		
4,253.0	3,154.3	4,281.7	3,270.2	26.3	22.9	147.97	217.5	1,567.4	137.2	105.6	31.57	4.347		
4,278.0	3,154.3	4,305.3	3,270.5	26.9	23.4	146.86	218.8	1,590.9	139.3	106.4	32.87	4.238		
4,300.0	3,154.4	4,326.1	3,270.7	27.4	23.9	145.80	219.6	1,611.7	141.4	107.3	34.09	4.147		
4,303.0	3,154.4	4,329.1	3,270.7	27.5	23.9	145.64	219.7	1,614.7	141.7	107.4	34.27	4.134		
4,328.0	3,154.5	4,354.1	3,271.1	28.1	24.5	144.42	220.6	1,639.7	144.1	108.4	35.73	4.034		
4,352.6	3,154.5	4,378.7	3,271.5	28.7	25.1	143.35	221.8	1,664.3	146.6	109.5	37.11	3.949		
4,353.0	3,154.5	4,379.1	3,271.5	28.7	25.1	143.33	221.8	1,664.7	146.6	109.5	37.13	3.948		
4,374.3	3,154.5	4,402.1	3,271.9	29.2	25.6	142.41	223.1	1,687.6	148.7	110.3	38.36	3.875		
4,378.0	3,154.5	4,406.4	3,271.9	29.3	25.7	142.25	223.3	1,691.9	149.0	110.4	38.59	3.862		
4,400.0	3,154.4	4,431.2	3,271.8	29.8	26.2	141.28	224.9	1,716.7	150.8	110.8	39.93	3.775		
4,403.0	3,154.4	4,434.6	3,271.7	29.8	26.3	141.15	225.1	1,720.0	151.0	110.8	40.12	3.763		
4,428.0	3,154.3	4,459.5	3,271.0	30.4	26.9	140.11	226.8	1,744.9	152.5	110.9	41.57	3.669		
4,453.0	3,154.1	4,480.3	3,270.5	31.0	27.4	139.11	227.7	1,765.7	154.6	111.6	42.93	3.601		
4,478.0	3,154.0	4,500.9	3,270.1	31.6	27.9	137.99	227.8	1,786.3	157.3	113.0	44.35	3.548		
4,500.0	3,153.9	4,519.8	3,269.8	32.1	28.3	136.86	227.4	1,805.2	160.4	114.7	45.68	3.511		
4,503.0	3,153.9	4,522.8	3,269.7	32.2	28.3	136.68	227.3	1,808.1	160.8	114.9	45.88	3.505		
4,528.0	3,153.8	4,547.4	3,269.3	32.8	28.7	135.18	226.5	1,832.7	164.5	116.9	47.57	3.457		
4,553.0	3,153.7	4,571.9	3,268.6	33.4	29.2	133.67	225.6	1,857.2	168.2	118.9	49.27	3.414		
4,578.0	3,153.5	4,596.6	3,267.7	34.0	29.5	132.16	224.5	1,881.9	172.0	121.1	50.90	3.379		
4,600.0	3,153.4	4,618.4	3,266.9	34.5	29.7	130.85	223.6	1,903.7	175.4	123.1	52.31	3.353		
4,603.0	3,153.4	4,621.4	3,266.8	34.6	29.8	130.67	223.5	1,906.6	175.9	123.4	52.50	3.350		
4,628.0	3,153.3	4,645.9	3,265.7	35.2	30.1	129.24	222.4	1,931.0	179.8	125.7	54.06	3.326		
4,653.0	3,153.2	4,669.5	3,264.9	35.7	30.4	127.96	221.4	1,954.6	183.9	128.3	55.52	3.312		
4,678.0	3,153.1	4,693.1	3,264.2	36.3	30.7	126.80	220.5	1,978.2	188.1	131.2	56.89	3.307		
4,700.0	3,153.0	4,715.2	3,263.8	36.9	31.0	125.83	219.8	2,000.2	192.0	133.8	58.15	3.301		
4,703.0	3,153.0	4,718.3	3,263.7	36.9	31.0	125.69	219.7	2,003.4	192.5	134.2	58.33	3.300		
4,728.0	3,152.8	4,744.9	3,263.2	37.5	31.4	124.63	219.1	2,029.9	196.7	136.9	59.81	3.289		
4,753.0	3,152.7	4,770.9	3,262.7	38.1	31.7	123.67	218.8	2,056.0	200.7	139.5	61.20	3.279		
4,778.0	3,152.6	4,794.6	3,262.4	38.7	32.1	122.88	218.7	2,079.6	204.7	142.2	62.42	3.279		
4,800.0	3,152.5	4,815.4	3,262.2	39.2	32.4	122.24	218.5	2,100.5	208.3	144.9	63.47	3.282		
4,803.0	3,152.5	4,818.3	3,262.2	39.3	32.4	122.16	218.5	2,103.3	208.8	145.2	63.61	3.283		
4,828.0	3,152.4	4,842.6	3,262.2	39.9	32.8	121.49	218.4	2,127.6	213.1	148.3	64.80	3.288		
4,853.0	3,152.2	4,867.3	3,262.1	40.5	33.2	120.81	218.2	2,152.4	217.4	151.3	66.03	3.292		
4,878.0	3,152.1	4,891.0	3,262.0	41.1	33.5	120.17	218.0	2,176.1	221.6	154.4	67.19	3.298		

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

Halliburton

Anticollision Report

Company:	Hilcorp Energy Company	Local Co-ordinate Reference:	Well Allison HZFC UN 123H
Project:	San Juan, NM	TVD Reference:	RKB-MSL= 6644 @ 6644.0usft
Reference Site:	Ignacio Blanco (32N7W9)	MD Reference:	RKB-MSL= 6644 @ 6644.0usft
Site Error:	5.0 usft	North Reference:	Grid
Reference Well:	Allison HZFC UN 123H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral 1 ST2	Database:	EDM 5000.17 Single User Db
Reference Design:	WP1	Offset TVD Reference:	Offset Datum

Offset Design: Ignacio Blanco (32N7W9) - Allison HZFC UN 123H - Lateral 1 ST1 - Lateral 1 ST1													Offset Site Error:	5.0 usft
Survey Program: 570-3_MWD, 3664-3_MWD, 4514-3_MWD													Offset Well Error:	1.0 usft
Reference	Offset	Semi Major Axis		Distance		Rule Assigned:		Warning						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
4,900.0	3,152.0	4,911.5	3,261.8	41.6	33.9	119.61	217.8	2,196.6	225.5	157.3	68.21	3.306		
4,903.0	3,152.0	4,914.2	3,261.8	41.7	33.9	119.54	217.7	2,199.2	226.0	157.7	68.34	3.308		
4,928.0	3,151.9	4,936.2	3,261.6	42.2	34.3	118.93	217.2	2,221.3	230.7	161.3	69.42	3.324		
4,953.0	3,151.8	4,958.3	3,261.5	42.8	34.6	118.32	216.4	2,243.3	235.7	165.2	70.49	3.344		
4,978.0	3,151.7	4,980.7	3,261.6	43.4	35.0	117.76	215.4	2,265.7	240.9	169.4	71.57	3.367		
5,000.0	3,151.6	5,000.4	3,261.9	43.9	35.3	117.34	214.6	2,285.4	245.7	173.2	72.48	3.390		
5,003.0	3,151.5	5,003.1	3,262.0	44.0	35.4	117.29	214.5	2,288.1	246.4	173.8	72.60	3.394		
5,028.0	3,151.4	5,025.6	3,262.7	44.6	35.8	116.89	213.5	2,310.5	252.0	178.4	73.59	3.425		
5,053.0	3,151.3	5,048.1	3,263.3	45.2	36.2	116.48	212.3	2,333.0	257.8	183.2	74.61	3.456		
5,078.0	3,151.2	5,070.6	3,263.9	45.8	36.5	116.05	210.9	2,355.4	263.8	188.2	75.63	3.488		
5,100.0	3,151.1	5,090.1	3,264.3	46.3	36.9	115.66	209.5	2,374.9	269.3	192.7	76.53	3.518		
5,103.0	3,151.1	5,092.7	3,264.3	46.4	36.9	115.61	209.3	2,377.5	270.0	193.4	76.65	3.523		
5,128.0	3,151.0	5,114.7	3,264.9	47.0	37.3	115.20	207.6	2,399.4	276.4	198.8	77.64	3.560		
5,153.0	3,150.8	5,136.5	3,265.7	47.6	37.7	114.83	205.8	2,421.2	283.0	204.4	78.60	3.600		
5,178.0	3,150.7	5,160.2	3,266.6	48.2	38.2	114.44	203.7	2,444.8	289.7	210.0	79.71	3.635		
5,200.0	3,150.6	5,181.8	3,267.2	48.7	38.6	114.08	201.8	2,466.2	295.6	214.9	80.76	3.660		
5,203.0	3,150.6	5,184.7	3,267.3	48.7	38.6	114.03	201.5	2,469.2	296.4	215.5	80.90	3.664		
5,228.0	3,150.5	5,209.0	3,267.7	49.3	39.1	113.59	199.3	2,493.3	303.1	221.0	82.09	3.692		
5,253.0	3,150.4	5,231.9	3,267.9	49.9	39.5	113.12	197.0	2,516.1	309.8	226.6	83.21	3.724		
5,278.0	3,150.2	5,254.5	3,267.5	50.5	39.9	112.58	194.5	2,538.6	316.7	232.4	84.34	3.755		
5,300.0	3,150.1	5,274.4	3,266.9	51.0	40.3	112.05	192.1	2,558.3	322.8	237.5	85.36	3.782		
5,303.0	3,150.1	5,277.1	3,266.8	51.1	40.4	111.98	191.7	2,561.0	323.7	238.2	85.50	3.785		
5,328.0	3,150.0	5,299.8	3,265.8	51.7	40.8	111.34	188.8	2,583.4	330.8	244.1	86.69	3.816		
5,353.0	3,149.9	5,322.3	3,264.6	52.3	41.2	110.69	185.7	2,605.7	338.0	250.1	87.87	3.846		
5,378.0	3,149.8	5,350.9	3,262.9	52.9	41.8	109.88	181.8	2,634.0	345.2	255.6	89.58	3.854		
5,400.0	3,149.7	5,380.7	3,261.5	53.4	42.4	109.17	178.5	2,663.6	351.1	259.7	91.39	3.842		
5,403.0	3,149.7	5,384.8	3,261.4	53.5	42.5	109.08	178.2	2,667.7	351.9	260.2	91.63	3.840		
5,428.0	3,149.5	5,416.1	3,260.2	54.1	43.1	108.48	175.8	2,698.8	357.9	264.5	93.37	3.833		
5,453.0	3,149.4	5,446.2	3,259.0	54.7	43.7	107.94	174.0	2,728.9	363.6	268.6	94.99	3.828		
5,478.0	3,149.3	5,472.4	3,258.0	55.2	44.3	107.49	172.8	2,755.0	369.0	272.6	96.32	3.830		
5,500.0	3,149.2	5,493.0	3,257.2	55.8	44.7	107.16	171.9	2,775.6	373.7	276.4	97.34	3.839		
5,503.0	3,149.2	5,495.8	3,257.1	55.8	44.7	107.11	171.7	2,778.4	374.4	276.9	97.48	3.841		
5,528.0	3,149.1	5,520.0	3,256.3	56.4	45.2	106.75	170.6	2,802.5	379.8	281.2	98.67	3.850		
5,553.0	3,149.0	5,543.2	3,255.7	57.0	45.7	106.44	169.5	2,825.7	385.4	285.6	99.78	3.862		
5,578.0	3,148.8	5,567.1	3,255.5	57.6	46.2	106.19	168.5	2,849.6	390.9	290.0	100.92	3.874		
5,600.0	3,148.7	5,588.5	3,255.7	58.1	46.7	106.02	167.7	2,871.0	395.8	293.9	101.92	3.884		
5,603.0	3,148.7	5,591.5	3,255.7	58.2	46.8	106.01	167.6	2,874.0	396.5	294.5	102.06	3.885		
5,628.0	3,148.6	5,616.7	3,256.2	58.8	47.3	105.86	166.8	2,899.2	402.1	298.8	103.23	3.895		
5,653.0	3,148.5	5,641.9	3,257.0	59.4	47.8	105.77	166.0	2,924.4	407.6	303.2	104.38	3.905		
5,678.0	3,148.4	5,667.2	3,257.8	60.0	48.4	105.69	165.4	2,949.6	413.0	307.5	105.54	3.913		
5,700.0	3,148.3	5,689.4	3,258.3	60.5	48.9	105.59	164.8	2,971.8	417.8	311.2	106.57	3.920		
5,703.0	3,148.2	5,692.5	3,258.4	60.6	48.9	105.57	164.7	2,974.9	418.4	311.7	106.71	3.921		
5,728.0	3,148.1	5,717.2	3,258.7	61.2	49.5	105.43	164.1	2,999.6	423.8	315.9	107.86	3.929		
5,753.0	3,148.0	5,740.9	3,258.7	61.7	50.0	105.26	163.3	3,023.2	429.2	320.2	108.97	3.938		
5,778.0	3,147.9	5,764.5	3,258.5	62.3	50.5	105.05	162.5	3,046.8	434.6	324.5	110.10	3.947		
5,800.0	3,147.8	5,787.2	3,258.0	62.9	51.0	104.82	161.6	3,069.6	439.4	328.2	111.22	3.951		
5,803.0	3,147.8	5,790.5	3,257.9	62.9	51.1	104.79	161.5	3,072.8	440.0	328.6	111.39	3.950		
5,828.0	3,147.7	5,817.7	3,257.1	63.5	51.7	104.50	160.6	3,100.0	445.3	332.6	112.75	3.950		
5,853.0	3,147.5	5,844.3	3,256.1	64.1	52.3	104.19	159.8	3,126.6	450.5	336.4	114.09	3.948		
5,878.0	3,147.4	5,869.7	3,254.8	64.7	52.8	103.87	159.0	3,151.9	455.6	340.2	115.36	3.949		
5,900.0	3,147.3	5,892.0	3,253.5	65.2	53.3	103.58	158.3	3,174.2	460.0	343.5	116.49	3.949		
5,903.0	3,147.3	5,895.0	3,253.3	65.3	53.4	103.53	158.2	3,177.2	460.6	344.0	116.65	3.949		

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

Halliburton

Anticollision Report

Company:	Hilcorp Energy Company	Local Co-ordinate Reference:	Well Allison HZFC UN 123H
Project:	San Juan, NM	TVD Reference:	RKB-MSL= 6644 @ 6644.0usft
Reference Site:	Ignacio Blanco (32N7W9)	MD Reference:	RKB-MSL= 6644 @ 6644.0usft
Site Error:	5.0 usft	North Reference:	Grid
Reference Well:	Allison HZFC UN 123H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral 1 ST2	Database:	EDM 5000.17 Single User Db
Reference Design:	WP1	Offset TVD Reference:	Offset Datum

Offset Design: Ignacio Blanco (32N7W9) - Allison HZFC UN 123H - Lateral 1 ST1 - Lateral 1 ST1													Offset Site Error: 5.0 usft
Survey Program: 570-3_MWD, 3664-3_MWD, 4514-3_MWD													Offset Well Error: 1.0 usft
Reference	Offset	Semi Major Axis	Rule Assigned:										
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	Offset	Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
							+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
5,928.0	3,147.2	5,924.7	3,251.6	65.9	54.0	103.15	157.6	3,206.8	465.5	347.3	118.17	3.939	
5,953.0	3,147.1	5,955.2	3,250.2	66.5	54.7	102.83	157.3	3,237.3	470.1	350.4	119.69	3.928	
5,978.0	3,146.9	5,984.5	3,249.2	67.1	55.4	102.59	157.6	3,266.5	474.5	353.3	121.11	3.917	
6,000.0	3,146.8	6,010.1	3,248.6	67.6	56.0	102.41	158.0	3,292.1	478.1	355.7	122.34	3.908	
6,003.0	3,146.8	6,013.6	3,248.5	67.7	56.1	102.39	158.1	3,295.6	478.6	356.1	122.50	3.906	
6,028.0	3,146.7	6,040.6	3,248.0	68.2	56.7	102.23	158.9	3,322.6	482.5	358.7	123.78	3.898	
6,053.0	3,146.6	6,066.5	3,247.4	68.8	57.3	102.07	159.7	3,348.5	486.3	361.3	125.02	3.890	
6,078.0	3,146.5	6,092.5	3,246.8	69.4	57.8	101.91	160.5	3,374.4	490.1	363.8	126.26	3.882	
6,100.0	3,146.4	6,115.3	3,246.4	69.9	58.4	101.79	161.4	3,397.2	493.4	366.0	127.34	3.874	
6,103.0	3,146.4	6,118.4	3,246.4	70.0	58.4	101.77	161.5	3,400.4	493.8	366.3	127.49	3.873	
6,128.0	3,146.2	6,144.4	3,246.3	70.6	59.0	101.69	162.6	3,426.3	497.5	368.8	128.70	3.865	
6,153.0	3,146.1	6,170.3	3,246.6	71.2	59.6	101.65	163.9	3,452.2	501.1	371.2	129.90	3.857	
6,178.0	3,146.0	6,196.2	3,247.2	71.8	60.2	101.64	165.2	3,478.0	504.6	373.5	131.08	3.850	
6,200.0	3,145.9	6,218.8	3,247.8	72.3	60.7	101.66	166.5	3,500.7	507.7	375.6	132.10	3.843	
6,203.0	3,145.9	6,221.9	3,247.9	72.4	60.8	101.66	166.7	3,503.7	508.1	375.9	132.24	3.842	
6,228.0	3,145.8	6,247.3	3,248.5	73.0	61.4	101.66	168.1	3,529.1	511.6	378.2	133.40	3.835	
6,253.0	3,145.7	6,272.7	3,248.9	73.6	62.0	101.64	169.5	3,554.4	515.0	380.4	134.57	3.827	
6,278.0	3,145.5	6,292.5	3,249.1	74.2	62.5	101.61	170.6	3,574.2	518.5	383.0	135.54	3.826	
6,300.0	3,145.4	6,309.4	3,249.4	74.7	62.8	101.59	171.3	3,591.1	521.8	385.5	136.35	3.827	
6,303.0	3,145.4	6,311.8	3,249.5	74.7	62.9	101.59	171.4	3,593.4	522.3	385.8	136.46	3.827	
6,328.0	3,145.3	6,330.9	3,250.0	75.3	63.3	101.59	172.0	3,612.6	526.3	388.9	137.35	3.832	
6,353.0	3,145.2	6,356.1	3,250.8	75.9	63.9	101.60	172.7	3,637.7	530.5	392.0	138.51	3.830	
6,378.0	3,145.1	6,384.9	3,251.4	76.5	64.6	101.58	173.6	3,666.5	534.5	394.7	139.84	3.823	
6,400.0	3,145.0	6,413.2	3,251.8	77.0	65.3	101.54	174.7	3,694.8	537.9	396.8	141.13	3.811	
6,403.0	3,144.9	6,417.6	3,251.8	77.1	65.4	101.53	174.9	3,699.2	538.4	397.0	141.33	3.809	
6,428.0	3,144.8	6,454.8	3,252.1	77.7	66.2	101.48	177.2	3,736.4	541.6	398.7	142.95	3.789	
6,453.0	3,144.7	6,478.9	3,252.3	78.3	66.8	101.45	179.0	3,760.3	544.6	400.5	144.09	3.780	
6,478.0	3,144.6	6,499.1	3,252.5	78.9	67.3	101.42	180.3	3,780.5	547.8	402.7	145.09	3.775	
6,500.0	3,144.5	6,516.9	3,252.7	79.4	67.7	101.40	181.3	3,798.3	550.7	404.7	145.96	3.773	
6,503.0	3,144.5	6,519.3	3,252.7	79.5	67.8	101.40	181.5	3,800.7	551.1	405.0	146.08	3.773	
6,528.0	3,144.4	6,537.9	3,252.9	80.1	68.2	101.38	182.4	3,819.2	554.7	407.7	146.99	3.774	
6,553.0	3,144.2	6,555.6	3,253.1	80.7	68.6	101.35	183.0	3,836.9	558.6	410.7	147.85	3.778	
6,578.0	3,144.1	6,573.2	3,253.3	81.3	69.0	101.31	183.4	3,854.5	562.8	414.1	148.69	3.785	
6,600.0	3,144.0	6,589.0	3,253.4	81.8	69.4	101.27	183.6	3,870.3	566.7	417.3	149.43	3.793	
6,603.0	3,144.0	6,589.0	3,253.4	81.8	69.4	101.27	183.6	3,870.3	567.3	417.9	149.42	3.797	
6,628.0	3,143.9	6,605.8	3,253.6	82.4	69.8	101.23	183.5	3,887.2	572.2	422.0	150.17	3.810	
6,653.0	3,143.8	6,621.1	3,253.8	83.0	70.2	101.20	183.2	3,902.4	577.4	426.6	150.80	3.829	
6,678.0	3,143.6	6,635.0	3,254.1	83.6	70.5	101.18	182.8	3,916.3	583.1	431.8	151.31	3.853	
6,700.0	3,143.5	6,650.7	3,254.5	84.1	70.9	101.15	182.0	3,932.0	588.3	436.4	151.96	3.872	
6,703.0	3,143.5	6,652.6	3,254.5	84.2	70.9	101.14	181.9	3,933.9	589.1	437.0	152.03	3.875	
6,728.0	3,143.4	6,668.9	3,254.8	84.8	71.3	101.10	180.9	3,950.1	595.4	442.8	152.65	3.901	
6,753.0	3,143.3	6,685.0	3,255.0	85.4	71.7	101.04	179.6	3,966.2	602.1	448.8	153.23	3.929	
6,778.0	3,143.2	6,705.2	3,255.2	86.0	72.2	100.96	177.7	3,986.3	609.0	454.9	154.12	3.952	
6,800.0	3,143.1	6,731.4	3,255.1	86.5	72.8	100.83	175.4	4,012.4	615.1	459.5	155.53	3.954	
6,803.0	3,143.1	6,734.9	3,255.1	86.6	72.9	100.81	175.1	4,015.9	615.9	460.1	155.73	3.955	
6,828.0	3,142.9	6,765.4	3,254.7	87.2	73.6	100.64	172.6	4,046.2	622.5	465.1	157.38	3.955	
6,853.0	3,142.8	6,797.5	3,254.0	87.8	74.4	100.45	170.3	4,078.3	628.8	469.7	159.13	3.952	
6,878.0	3,142.7	6,827.8	3,253.2	88.3	75.1	100.25	168.4	4,108.5	634.9	474.2	160.75	3.950	
6,900.0	3,142.6	6,851.0	3,252.7	88.9	75.7	100.12	167.2	4,131.7	640.1	478.2	161.92	3.953	
6,903.0	3,142.6	6,854.1	3,252.6	88.9	75.8	100.11	167.0	4,134.8	640.8	478.7	162.08	3.954	
6,928.0	3,142.5	6,880.6	3,252.4	89.5	76.4	100.00	165.7	4,161.2	646.7	483.3	163.41	3.957	
6,953.0	3,142.4	6,903.7	3,252.3	90.1	77.0	99.92	164.7	4,184.3	652.5	488.0	164.52	3.966	

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

Halliburton

Anticollision Report

Company:	Hilcorp Energy Company	Local Co-ordinate Reference:	Well Allison HZFC UN 123H
Project:	San Juan, NM	TVD Reference:	RKB-MSL= 6644 @ 6644.0usft
Reference Site:	Ignacio Blanco (32N7W9)	MD Reference:	RKB-MSL= 6644 @ 6644.0usft
Site Error:	5.0 usft	North Reference:	Grid
Reference Well:	Allison HZFC UN 123H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral 1 ST2	Database:	EDM 5000.17 Single User Db
Reference Design:	WP1	Offset TVD Reference:	Offset Datum

Offset Design: Ignacio Blanco (32N7W9) - Allison HZFC UN 123H - Lateral 1 ST1 - Lateral 1 ST1													Offset Site Error: 5.0 usft
Survey Program: 570-3_MWD, 3664-3_MWD, 4514-3_MWD													Offset Well Error: 1.0 usft
Reference	Offset	Semi Major Axis		Distance		Rule Assigned:		Warning					
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
6,978.0	3,142.2	6,926.8	3,252.0	90.7	77.5	99.82	163.5	4,207.4	658.4	492.8	165.64	3.975	
7,000.0	3,142.1	6,941.0	3,251.8	91.2	77.9	99.75	162.8	4,221.6	663.6	497.4	166.23	3.992	
7,003.0	3,142.1	6,941.0	3,251.8	91.3	77.9	99.75	162.8	4,221.6	664.4	498.2	166.17	3.998	
7,028.0	3,142.0	6,966.2	3,251.4	91.9	78.5	99.63	161.3	4,246.7	670.5	503.0	167.43	4.004	
7,053.0	3,141.9	6,984.2	3,251.3	92.5	78.9	99.56	160.1	4,264.7	676.8	508.6	168.20	4.024	
7,078.0	3,141.8	7,003.0	3,251.4	93.1	79.4	99.50	158.7	4,283.4	683.4	514.4	169.01	4.043	
7,100.0	3,141.7	7,025.9	3,251.4	93.6	79.9	99.43	156.9	4,306.3	689.2	519.1	170.16	4.050	
7,103.0	3,141.6	7,029.2	3,251.4	93.7	80.0	99.42	156.6	4,309.5	690.0	519.7	170.33	4.051	
7,128.0	3,141.5	7,056.7	3,251.3	94.3	80.7	99.32	154.5	4,336.9	696.5	524.8	171.74	4.056	
7,153.0	3,141.4	7,091.6	3,250.9	94.9	81.5	99.17	152.2	4,371.7	702.8	529.2	173.65	4.047	
7,178.0	3,141.3	7,129.4	3,249.9	95.4	82.4	98.99	150.3	4,409.5	708.7	533.0	175.70	4.034	
7,200.0	3,141.2	7,150.6	3,249.2	96.0	83.0	98.88	149.4	4,430.7	713.7	536.9	176.75	4.038	
7,203.0	3,141.2	7,153.6	3,249.1	96.0	83.0	98.86	149.3	4,433.7	714.3	537.4	176.90	4.038	
7,228.0	3,141.1	7,179.3	3,248.0	96.6	83.7	98.70	148.2	4,459.3	720.0	541.8	178.20	4.040	
7,253.0	3,140.9	7,201.5	3,247.0	97.2	84.2	98.56	147.2	4,481.5	725.6	546.3	179.29	4.047	
7,278.0	3,140.8	7,222.6	3,246.1	97.8	84.7	98.45	146.3	4,502.5	731.3	551.0	180.30	4.056	
7,300.0	3,140.7	7,241.0	3,245.6	98.3	85.2	98.36	145.3	4,521.0	736.4	555.2	181.18	4.065	
7,303.0	3,140.7	7,243.5	3,245.5	98.4	85.2	98.35	145.2	4,523.5	737.1	555.8	181.30	4.066	
7,328.0	3,140.6	7,268.7	3,245.0	99.0	85.8	98.24	144.0	4,548.6	743.0	560.5	182.56	4.070	
7,353.0	3,140.5	7,295.1	3,244.6	99.6	86.5	98.15	142.7	4,575.0	748.8	565.0	183.87	4.073	
7,378.0	3,140.4	7,309.0	3,244.5	100.2	86.8	98.11	142.1	4,588.8	754.7	570.3	184.42	4.092	
7,400.0	3,140.2	7,330.0	3,244.4	100.7	87.3	98.06	141.1	4,609.9	759.9	574.5	185.44	4.098	
7,403.0	3,140.2	7,331.9	3,244.4	100.8	87.4	98.05	141.0	4,611.7	760.7	575.2	185.52	4.100	
7,428.0	3,140.1	7,347.3	3,244.4	101.4	87.8	98.02	140.0	4,627.1	767.0	580.9	186.12	4.121	
7,453.0	3,140.0	7,370.0	3,244.5	101.9	88.3	97.96	138.2	4,649.7	773.6	586.4	187.21	4.133	
7,478.0	3,139.9	7,384.9	3,244.5	102.5	88.7	97.93	136.9	4,664.5	780.4	592.6	187.75	4.156	
7,500.0	3,139.8	7,410.1	3,244.5	103.1	89.3	97.87	134.8	4,689.7	786.3	597.2	189.07	4.159	
7,503.0	3,139.8	7,413.6	3,244.5	103.1	89.4	97.86	134.6	4,693.1	787.1	597.9	189.25	4.159	
7,528.0	3,139.6	7,441.2	3,244.4	103.7	90.1	97.78	132.5	4,720.7	793.7	603.0	190.67	4.163	
7,553.0	3,139.5	7,466.9	3,244.0	104.3	90.7	97.70	130.5	4,746.3	800.2	608.2	191.96	4.168	
7,578.0	3,139.4	7,492.6	3,243.4	104.9	91.3	97.59	128.6	4,771.9	806.7	613.4	193.26	4.174	
7,600.0	3,139.3	7,514.3	3,242.6	105.4	91.9	97.49	127.0	4,793.5	812.3	618.0	194.34	4.180	
7,603.0	3,139.3	7,517.2	3,242.5	105.5	92.0	97.48	126.8	4,796.5	813.1	618.6	194.49	4.181	
7,628.0	3,139.2	7,541.8	3,241.4	106.1	92.6	97.35	125.0	4,820.9	819.5	623.8	195.72	4.187	
7,653.0	3,139.1	7,565.4	3,240.2	106.7	93.1	97.21	123.2	4,844.4	825.9	629.0	196.90	4.195	
7,678.0	3,138.9	7,588.1	3,239.0	107.3	93.7	97.07	121.5	4,867.0	832.4	634.4	198.01	4.204	
7,700.0	3,138.8	7,608.0	3,237.7	107.8	94.2	96.95	119.9	4,886.8	838.1	639.1	198.99	4.212	
7,703.0	3,138.8	7,610.7	3,237.6	107.9	94.3	96.93	119.7	4,889.5	838.9	639.8	199.12	4.213	
7,728.0	3,138.7	7,629.5	3,236.4	108.4	94.7	96.81	118.1	4,908.2	845.5	645.5	199.97	4.228	
7,753.0	3,138.6	7,647.0	3,235.6	109.0	95.2	96.72	116.5	4,925.7	852.3	651.6	200.72	4.246	
7,778.0	3,138.5	7,664.5	3,234.9	109.6	95.6	96.64	114.9	4,943.1	859.3	657.8	201.46	4.265	
7,800.0	3,138.4	7,682.3	3,234.4	110.2	96.0	96.57	113.1	4,960.8	865.5	663.3	202.27	4.279	
7,803.0	3,138.3	7,686.2	3,234.3	110.2	96.1	96.55	112.7	4,964.6	866.4	663.9	202.48	4.279	
7,828.0	3,138.2	7,718.4	3,233.9	110.8	96.9	96.46	109.6	4,996.7	873.4	669.2	204.23	4.276	
7,853.0	3,138.1	7,757.8	3,234.2	111.4	97.9	96.41	106.5	5,036.0	880.1	673.7	206.42	4.264	
7,878.0	3,138.0	7,808.7	3,235.6	112.0	99.2	96.43	103.8	5,086.8	886.3	677.1	209.19	4.237	
7,900.0	3,137.9	7,823.9	3,236.0	112.5	99.5	96.44	103.1	5,101.9	891.5	681.6	209.86	4.248	
7,903.0	3,137.9	7,826.6	3,236.1	112.6	99.6	96.44	103.0	5,104.6	892.2	682.2	209.99	4.249	
7,928.0	3,137.8	7,849.3	3,236.6	113.2	100.2	96.44	102.0	5,127.3	898.1	687.0	211.07	4.255	
7,953.0	3,137.6	7,861.0	3,236.8	113.8	100.5	96.44	101.4	5,139.0	904.2	692.7	211.49	4.275	
7,978.0	3,137.5	7,886.3	3,237.3	114.4	101.1	96.43	100.0	5,164.3	910.3	697.5	212.73	4.279	
8,000.0	3,137.4	7,901.2	3,237.7	114.9	101.5	96.43	99.1	5,179.2	915.9	702.5	213.36	4.293	

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

Halliburton

Anticollision Report

Company:	Hilcorp Energy Company	Local Co-ordinate Reference:	Well Allison HZFC UN 123H
Project:	San Juan, NM	TVD Reference:	RKB-MSL= 6644 @ 6644.0usft
Reference Site:	Ignacio Blanco (32N7W9)	MD Reference:	RKB-MSL= 6644 @ 6644.0usft
Site Error:	5.0 usft	North Reference:	Grid
Reference Well:	Allison HZFC UN 123H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral 1 ST2	Database:	EDM 5000.17 Single User Db
Reference Design:	WP1	Offset TVD Reference:	Offset Datum

Offset Design: Ignacio Blanco (32N7W9) - Allison HZFC UN 123H - Lateral 1 ST1 - Lateral 1 ST1												Offset Site Error:	5.0 usft
Survey Program: 570-3_MWD, 3664-3_MWD, 4514-3_MWD												Offset Well Error:	1.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
							+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
8,003.0	3,137.4	7,903.3	3,237.8	115.0	101.5	96.43	99.0	5,181.2	916.6	703.2	213.44	4.295	
8,028.0	3,137.3	7,922.0	3,238.4	115.5	102.0	96.45	97.6	5,199.9	923.2	708.9	214.26	4.309	
8,053.0	3,137.2	7,939.6	3,239.1	116.1	102.4	96.46	96.3	5,217.4	929.9	714.9	215.00	4.325	
8,078.0	3,137.1	7,959.4	3,239.8	116.7	102.9	96.47	94.7	5,237.1	936.7	720.9	215.87	4.339	
8,100.0	3,136.9	7,976.7	3,240.3	117.2	103.3	96.48	93.2	5,254.4	942.8	726.2	216.64	4.352	
8,103.0	3,136.9	7,984.0	3,240.5	117.3	103.5	96.48	92.5	5,261.6	943.7	726.6	217.08	4.347	
8,128.0	3,136.8	8,004.2	3,240.9	117.9	104.0	96.47	90.7	5,281.7	950.7	732.7	217.98	4.361	
8,153.0	3,136.7	8,031.2	3,241.4	118.5	104.7	96.45	88.4	5,308.6	957.6	738.2	219.35	4.366	
8,178.0	3,136.6	8,054.4	3,241.7	119.1	105.3	96.43	86.4	5,331.7	964.5	744.0	220.47	4.375	
8,200.0	3,136.5	8,071.3	3,241.7	119.6	105.7	96.41	84.8	5,348.5	970.6	749.4	221.22	4.388	
8,203.0	3,136.5	8,073.6	3,241.7	119.7	105.7	96.40	84.6	5,350.8	971.4	750.1	221.32	4.389	
8,228.0	3,136.3	8,092.7	3,241.6	120.3	106.2	96.36	82.8	5,369.8	978.5	756.4	222.16	4.405	
8,253.0	3,136.2	8,112.9	3,241.2	120.9	106.7	96.31	80.7	5,390.0	985.7	762.6	223.09	4.419	
8,278.0	3,136.1	8,135.9	3,240.6	121.5	107.3	96.23	78.3	5,412.8	993.0	768.8	224.21	4.429	
8,300.0	3,136.0	8,156.1	3,240.0	122.0	107.8	96.16	76.1	5,432.8	999.4	774.2	225.19	4.438	
8,303.0	3,136.0	8,158.8	3,239.9	122.0	107.9	96.15	75.8	5,435.6	1,000.3	774.9	225.32	4.439	
8,328.0	3,135.9	8,188.3	3,238.8	122.6	108.6	96.04	72.7	5,464.9	1,007.5	780.6	226.90	4.440	
8,353.0	3,135.8	8,222.4	3,237.8	123.2	109.5	95.93	69.4	5,498.8	1,014.5	785.8	228.78	4.435	
8,378.0	3,135.6	8,258.7	3,237.3	123.8	110.4	95.85	66.3	5,535.0	1,021.3	790.6	230.76	4.426	
8,400.0	3,135.5	8,291.3	3,237.4	124.3	111.2	95.81	64.0	5,567.5	1,027.0	794.5	232.50	4.417	
8,403.0	3,135.5	8,295.8	3,237.4	124.4	111.3	95.81	63.7	5,571.9	1,027.8	795.1	232.74	4.416	
8,428.0	3,135.4	8,316.5	3,237.5	125.0	111.8	95.79	62.3	5,592.6	1,034.2	800.5	233.71	4.425	
8,453.0	3,135.3	8,339.4	3,237.5	125.6	112.4	95.76	60.7	5,615.5	1,040.6	805.8	234.82	4.432	
8,478.0	3,135.2	8,363.1	3,237.4	126.2	113.0	95.73	59.1	5,639.1	1,047.1	811.1	235.97	4.437	
8,500.0	3,135.1	8,384.6	3,237.1	126.7	113.5	95.69	57.6	5,660.6	1,052.7	815.7	237.04	4.441	
8,503.0	3,135.0	8,387.6	3,237.1	126.8	113.6	95.68	57.4	5,663.5	1,053.5	816.3	237.18	4.442	
8,528.0	3,134.9	8,412.0	3,236.5	127.4	114.2	95.62	55.6	5,687.9	1,059.9	821.6	238.40	4.446	
8,553.0	3,134.8	8,434.4	3,235.9	128.0	114.8	95.56	54.0	5,710.2	1,066.4	826.9	239.48	4.453	
8,578.0	3,134.7	8,456.7	3,235.3	128.6	115.3	95.50	52.4	5,732.4	1,072.9	832.3	240.56	4.460	
8,600.0	3,134.6	8,474.0	3,234.8	129.1	115.8	95.45	51.1	5,749.7	1,078.6	837.3	241.37	4.469	
8,603.0	3,134.6	8,474.0	3,234.8	129.1	115.8	95.45	51.1	5,749.7	1,079.4	838.1	241.33	4.473	
8,628.0	3,134.5	8,497.0	3,234.2	129.7	116.3	95.39	49.3	5,772.6	1,086.1	843.6	242.45	4.480	
8,653.0	3,134.3	8,515.7	3,233.7	130.3	116.8	95.35	47.7	5,791.3	1,092.8	849.5	243.30	4.492	
8,678.0	3,134.2	8,534.5	3,233.3	130.9	117.3	95.30	46.0	5,809.9	1,099.7	855.6	244.14	4.504	
8,700.0	3,134.1	8,551.0	3,233.1	131.4	117.7	95.27	44.5	5,826.4	1,105.8	861.0	244.88	4.516	
8,703.0	3,134.1	8,551.0	3,233.1	131.5	117.7	95.27	44.5	5,826.4	1,106.7	861.9	244.83	4.520	
8,728.0	3,134.0	8,572.9	3,232.6	132.1	118.2	95.22	42.4	5,848.2	1,113.8	867.9	245.87	4.530	
8,753.0	3,133.9	8,592.5	3,232.0	132.7	118.7	95.17	40.3	5,867.7	1,121.0	874.2	246.77	4.543	
8,778.0	3,133.8	8,612.0	3,231.3	133.3	119.2	95.11	38.3	5,887.1	1,128.2	880.6	247.65	4.556	
8,800.0	3,133.6	8,634.8	3,230.5	133.8	119.8	95.03	35.8	5,909.7	1,134.7	885.8	248.82	4.560	
8,803.0	3,133.6	8,638.0	3,230.4	133.9	119.9	95.03	35.5	5,912.8	1,135.5	886.6	248.98	4.561	
8,828.0	3,133.5	8,663.9	3,229.7	134.5	120.5	94.96	32.7	5,938.7	1,142.8	892.5	250.30	4.566	
8,853.0	3,133.4	8,688.7	3,229.4	135.1	121.2	94.92	30.2	5,963.3	1,150.0	898.5	251.54	4.572	
8,878.0	3,133.3	8,712.7	3,229.2	135.6	121.8	94.89	27.8	5,987.1	1,157.3	904.5	252.71	4.579	
8,900.0	3,133.2	8,733.8	3,229.2	136.2	122.3	94.86	25.6	6,008.1	1,163.6	909.9	253.75	4.586	
8,903.0	3,133.2	8,737.1	3,229.2	136.2	122.4	94.86	25.3	6,011.4	1,164.5	910.6	253.92	4.586	
8,928.0	3,133.0	8,767.3	3,229.0	136.8	123.1	94.82	22.3	6,041.5	1,171.6	916.1	255.51	4.585	
8,953.0	3,132.9	8,797.7	3,228.5	137.4	123.9	94.76	19.5	6,071.7	1,178.6	921.5	257.11	4.584	
8,978.0	3,132.8	8,825.1	3,227.7	138.0	124.6	94.70	17.0	6,099.0	1,185.6	927.0	258.52	4.586	
9,000.0	3,132.7	8,849.4	3,226.6	138.5	125.2	94.62	14.8	6,123.2	1,191.6	931.8	259.77	4.587	
9,003.0	3,132.7	8,852.7	3,226.5	138.6	125.3	94.61	14.5	6,126.5	1,192.4	932.5	259.94	4.587	
9,028.0	3,132.6	8,966.6	3,226.2	139.2	128.2	94.52	9.4	6,240.2	1,198.1	932.0	266.01	4.504	

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

Halliburton

Anticollision Report

Company:	Hilcorp Energy Company	Local Co-ordinate Reference:	Well Allison HZFC UN 123H
Project:	San Juan, NM	TVD Reference:	RKB-MSL= 6644 @ 6644.0usft
Reference Site:	Ignacio Blanco (32N7W9)	MD Reference:	RKB-MSL= 6644 @ 6644.0usft
Site Error:	5.0 usft	North Reference:	Grid
Reference Well:	Allison HZFC UN 123H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral 1 ST2	Database:	EDM 5000.17 Single User Db
Reference Design:	WP1	Offset TVD Reference:	Offset Datum

Offset Design: Ignacio Blanco (32N7W9) - Allison HZFC UN 123H - Lateral 1 ST1 - Lateral 1 ST1													Offset Site Error:	5.0 usft
Survey Program:		570-3_MWD, 3664-3_MWD, 4514-3_MWD					Rule Assigned:		Offset Well Error:	1.0 usft				
Reference		Offset		Semi Major Axis		Offset Wellbore Centre		Distance		Warning				
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
9,053.0	3,132.5	8,999.6	3,227.2	139.8	129.0	94.55	9.4	6,273.1	1,202.9	935.3	267.58	4.496		
9,078.0	3,132.3	9,024.1	3,227.7	140.4	129.6	94.56	9.4	6,297.7	1,207.7	939.0	268.77	4.494		
9,100.0	3,132.2	9,041.0	3,227.9	140.9	130.0	94.56	9.4	6,314.6	1,212.0	942.4	269.61	4.495		
9,103.0	3,132.2	9,047.4	3,227.9	141.0	130.2	94.56	9.4	6,321.0	1,212.6	942.6	269.91	4.492		
9,128.0	3,132.1	9,067.8	3,228.0	141.6	130.7	94.55	9.3	6,341.4	1,217.4	946.5	270.92	4.494		
9,153.0	3,132.0	9,088.2	3,227.9	142.2	131.2	94.54	9.1	6,361.8	1,222.4	950.5	271.93	4.495		
9,178.0	3,131.9	9,102.0	3,227.8	142.7	131.6	94.53	8.9	6,375.6	1,227.5	954.9	272.62	4.503		
9,200.0	3,131.8	9,125.1	3,227.7	143.3	132.1	94.51	8.6	6,398.7	1,232.0	958.3	273.75	4.500		
9,203.0	3,131.8	9,127.4	3,227.7	143.3	132.2	94.51	8.5	6,401.0	1,232.6	958.8	273.87	4.501		
9,228.0	3,131.6	9,146.6	3,227.9	143.9	132.7	94.51	8.2	6,420.2	1,237.9	963.1	274.80	4.505		
9,253.0	3,131.5	9,166.6	3,228.4	144.5	133.2	94.52	7.7	6,440.1	1,243.3	967.5	275.77	4.508		
9,278.0	3,131.4	9,193.7	3,229.3	145.1	133.9	94.55	7.1	6,467.2	1,248.6	971.5	277.08	4.506		
9,300.0	3,131.3	9,217.6	3,230.3	145.6	134.5	94.58	6.7	6,491.1	1,253.3	975.1	278.24	4.504		
9,303.0	3,131.3	9,220.8	3,230.4	145.7	134.6	94.58	6.6	6,494.3	1,253.9	975.5	278.40	4.504		
9,328.0	3,131.2	9,242.7	3,231.3	146.3	135.1	94.61	6.2	6,516.2	1,259.3	979.8	279.45	4.506		
9,353.0	3,131.0	9,263.7	3,232.0	146.9	135.6	94.63	5.7	6,537.2	1,264.6	984.2	280.47	4.509		
9,378.0	3,130.9	9,286.0	3,232.5	147.5	136.2	94.64	5.2	6,559.5	1,270.1	988.5	281.55	4.511		
9,400.0	3,130.8	9,298.7	3,232.8	148.0	136.5	94.65	4.8	6,572.2	1,275.0	992.8	282.15	4.519		
9,403.0	3,130.8	9,300.6	3,232.8	148.1	136.6	94.65	4.7	6,574.1	1,275.6	993.4	282.24	4.520		
9,428.0	3,130.7	9,316.2	3,233.2	148.7	137.0	94.66	4.1	6,589.7	1,281.4	998.4	282.96	4.528		
9,453.0	3,130.6	9,331.8	3,233.7	149.3	137.4	94.66	3.5	6,605.2	1,287.2	1,003.6	283.67	4.538		
9,478.0	3,130.5	9,347.0	3,234.1	149.8	137.7	94.68	2.7	6,620.4	1,293.3	1,008.9	284.35	4.548		
9,500.0	3,130.4	9,363.6	3,234.6	150.4	138.2	94.69	1.8	6,636.9	1,298.7	1,013.6	285.12	4.555		
9,503.0	3,130.3	9,365.8	3,234.7	150.4	138.2	94.69	1.7	6,639.1	1,299.5	1,014.3	285.22	4.556		
9,528.0	3,130.2	9,384.1	3,235.0	151.0	138.7	94.69	0.5	6,657.5	1,305.8	1,019.7	286.06	4.565		
9,553.0	3,130.1	9,408.0	3,235.2	151.6	139.3	94.68	-1.1	6,681.3	1,312.2	1,025.0	287.23	4.569		
9,574.3	3,130.0	9,445.8	3,235.2	152.1	140.2	94.65	-3.4	6,718.9	1,317.6	1,028.4	289.22	4.556		

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

Halliburton

Anticollision Report

Company:	Hilcorp Energy Company	Local Co-ordinate Reference:	Well Allison HZFC UN 123H
Project:	San Juan, NM	TVD Reference:	RKB-MSL= 6644 @ 6644.0usft
Reference Site:	Ignacio Blanco (32N7W9)	MD Reference:	RKB-MSL= 6644 @ 6644.0usft
Site Error:	5.0 usft	North Reference:	Grid
Reference Well:	Allison HZFC UN 123H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral 1 ST2	Database:	EDM 5000.17 Single User Db
Reference Design:	WP1	Offset TVD Reference:	Offset Datum

Offset Design: Ignacio Blanco (32N7W9) - Allison HZFC UN 123H - Pilot - ST00BP00													Offset Site Error: 5.0 usft
Survey Program: 570-3_MWD													Offset Well Error: 1.0 usft
Reference	Offset	Semi Major Axis		Distance		Rule Assigned:		Warning					
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
3,030.7	2,917.6	3,030.7	2,917.6	0.3	0.1	-42.90	64.2	436.0	0.0	-2.2	2.23	0.000	Collision RiskProcedures Req'd, CC, S
3,053.0	2,934.2	3,053.0	2,934.2	2.9	1.2	-43.43	67.6	450.5	0.1	-2.4	2.48	0.030	Collision RiskProcedures Req'd
3,068.0	2,945.4	3,068.0	2,945.3	2.9	1.9	-43.78	69.9	460.3	0.2	-2.5	2.72	0.069	Collision RiskProcedures Req'd
3,078.0	2,952.8	3,078.0	2,952.7	2.9	2.4	-51.08	71.4	466.9	0.2	-2.7	2.94	0.082	Collision RiskProcedures Req'd
3,089.0	2,960.7	3,089.0	2,960.7	2.9	2.9	-78.56	73.0	474.2	0.2	-3.1	3.33	0.071	Collision RiskProcedures Req'd
3,100.0	2,968.6	3,100.0	2,968.7	3.0	3.0	-121.99	74.6	481.6	0.3	-3.2	3.54	0.083	Collision RiskProcedures Req'd, ES
3,103.0	2,970.7	3,103.0	2,970.8	3.0	3.0	-131.66	75.0	483.7	0.3	-3.2	3.51	0.094	Collision RiskProcedures Req'd
3,128.0	2,987.9	3,128.0	2,988.6	3.0	3.0	-171.55	78.6	501.0	0.9	-2.4	3.37	0.276	Collision RiskProcedures Req'd
3,150.0	3,002.4	3,150.0	3,003.7	3.1	3.1	176.50	81.7	516.6	1.8	-1.9	3.64	0.490	Collision RiskProcedures Req'd
3,153.0	3,004.4	3,153.0	3,005.8	3.1	3.1	175.43	82.2	518.7	1.9	-1.8	3.69	0.521	Collision RiskProcedures Req'd
3,178.0	3,020.1	3,178.1	3,022.5	3.2	3.1	168.30	85.5	537.1	3.2	-1.0	4.20	0.765	Collision RiskProcedures Req'd
3,200.0	3,033.3	3,200.1	3,036.7	3.2	3.2	163.65	88.4	553.7	4.6	-0.1	4.70	0.970	Collision RiskProcedures Req'd
3,203.0	3,035.0	3,203.1	3,038.6	3.3	3.2	163.10	88.8	556.0	4.8	0.0	4.78	0.997	Collision RiskProcedures Req'd
3,228.0	3,049.2	3,228.2	3,054.0	3.3	3.3	159.17	91.9	575.5	6.6	1.2	5.38	1.225	Collision RiskProcedures Req'd
3,250.0	3,060.9	3,250.3	3,067.1	3.4	3.3	156.80	94.6	593.2	8.4	2.4	5.96	1.408	Collision RiskProcedures Req'd
3,253.0	3,062.5	3,253.3	3,068.9	3.4	3.3	156.53	95.0	595.6	8.6	2.6	6.04	1.431	Collision RiskProcedures Req'd
3,278.0	3,074.9	3,278.5	3,083.1	3.9	3.7	154.69	98.0	616.1	10.9	4.2	6.72	1.627	Collision RiskProcedures Req'd
3,300.0	3,085.2	3,300.5	3,095.1	4.3	4.2	153.94	100.7	634.4	13.2	6.0	7.27	1.819	Collision RiskProcedures Req'd
3,303.0	3,086.5	3,303.5	3,096.7	4.4	4.2	153.92	101.0	636.9	13.6	6.2	7.35	1.848	Collision RiskProcedures Req'd
3,328.0	3,097.2	3,328.6	3,109.9	4.9	4.7	154.26	104.1	658.0	16.7	8.9	7.86	2.127	
3,350.0	3,105.9	3,350.6	3,121.3	5.3	5.2	155.09	106.8	676.7	19.9	11.6	8.26	2.406	
3,353.0	3,107.0	3,353.7	3,122.8	5.4	5.3	155.25	107.2	679.3	20.3	12.0	8.32	2.444	
3,378.0	3,115.9	3,378.8	3,135.3	5.9	5.8	157.00	110.6	700.8	24.3	15.6	8.70	2.796	
3,400.0	3,122.9	3,401.0	3,146.0	6.4	6.2	158.92	113.9	720.0	28.1	19.2	8.95	3.140	
3,403.0	3,123.8	3,404.1	3,147.4	6.5	6.3	159.19	114.4	722.6	28.7	19.7	8.99	3.188	
3,428.0	3,130.8	3,429.5	3,159.1	7.0	6.8	161.55	118.6	744.8	33.3	24.1	9.25	3.602	
3,450.0	3,136.2	3,451.9	3,168.9	7.5	7.3	163.60	122.5	764.6	37.6	28.2	9.46	3.980	
3,453.0	3,136.8	3,455.0	3,170.2	7.6	7.4	163.88	123.0	767.3	38.3	28.8	9.49	4.032	
3,478.0	3,141.9	3,480.0	3,180.6	8.1	7.9	166.10	127.8	789.6	43.5	33.9	9.67	4.501	
3,500.0	3,145.6	3,501.6	3,189.4	8.6	8.4	167.91	131.9	808.9	48.8	39.0	9.82	4.971	
3,503.0	3,146.0	3,504.5	3,190.6	8.7	8.5	168.14	132.5	811.5	49.6	39.8	9.85	5.036	
3,528.0	3,149.1	3,528.9	3,200.3	9.3	9.0	170.00	137.3	833.3	56.5	46.5	10.02	5.637	
3,550.0	3,151.0	3,549.8	3,208.6	9.8	9.5	171.47	141.6	852.0	63.3	53.1	10.19	6.209	
3,553.0	3,151.2	3,552.6	3,209.8	9.9	9.5	171.67	142.2	854.6	64.3	54.1	10.22	6.287	
3,578.0	3,152.4	3,576.1	3,219.1	10.5	10.0	173.19	147.1	875.5	73.0	62.6	10.42	7.004	
3,592.3	3,152.6	3,589.3	3,224.3	10.8	10.3	174.00	149.9	887.3	78.4	67.9	10.55	7.433	
3,600.0	3,152.6	3,596.4	3,227.1	11.0	10.5	174.44	151.5	893.6	81.4	70.8	10.62	7.665	
3,603.0	3,152.6	3,599.1	3,228.2	11.0	10.6	174.61	152.1	896.1	82.6	71.9	10.65	7.755	
3,628.0	3,152.6	3,622.1	3,237.3	11.6	11.1	175.89	157.2	916.5	92.4	81.5	10.89	8.480	
3,653.0	3,152.7	3,645.1	3,246.4	12.2	11.6	177.00	162.4	937.0	102.1	91.0	11.15	9.163	
3,678.0	3,152.8	3,668.4	3,255.7	12.8	12.1	178.00	167.8	957.6	111.9	100.5	11.43	9.790	
3,700.0	3,152.8	3,689.2	3,263.8	13.3	12.5	178.81	172.7	976.2	120.5	108.8	11.71	10.290	
3,703.0	3,152.8	3,692.0	3,264.9	13.4	12.6	178.91	173.4	978.7	121.6	109.9	11.75	10.355	
3,728.0	3,152.9	3,715.8	3,274.1	14.0	13.1	179.74	179.2	999.8	131.2	119.2	12.07	10.875	
3,753.0	3,153.0	3,738.9	3,282.9	14.5	13.6	-179.52	184.9	1,020.4	140.8	128.4	12.40	11.354	
3,778.0	3,153.0	3,762.0	3,291.7	15.1	14.1	-178.82	190.8	1,040.9	150.3	137.6	12.73	11.807	
3,800.0	3,153.1	3,782.2	3,299.5	15.6	14.6	-178.23	196.0	1,058.9	158.7	145.7	13.03	12.184	
3,803.0	3,153.1	3,785.0	3,300.6	15.7	14.6	-178.15	196.7	1,061.4	159.9	146.8	13.07	12.229	
3,828.0	3,153.2	3,808.6	3,309.5	16.3	15.2	-177.49	203.0	1,082.3	169.4	156.0	13.45	12.593	
3,853.0	3,153.2	3,832.3	3,318.4	16.9	15.7	-176.84	209.4	1,103.2	178.9	165.1	13.83	12.935	
3,878.0	3,153.3	3,856.1	3,327.3	17.5	16.2	-176.19	216.1	1,124.3	188.3	174.1	14.22	13.245	
3,900.0	3,153.4	3,876.8	3,334.9	18.0	16.7	-175.64	222.0	1,142.6	196.5	182.0	14.58	13.484	

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

Halliburton

Anticollision Report

Company:	Hilcorp Energy Company	Local Co-ordinate Reference:	Well Allison HZFC UN 123H
Project:	San Juan, NM	TVD Reference:	RKB-MSL= 6644 @ 6644.0usft
Reference Site:	Ignacio Blanco (32N7W9)	MD Reference:	RKB-MSL= 6644 @ 6644.0usft
Site Error:	5.0 usft	North Reference:	Grid
Reference Well:	Allison HZFC UN 123H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral 1 ST2	Database:	EDM 5000.17 Single User Db
Reference Design:	WP1	Offset TVD Reference:	Offset Datum

Offset Design: Ignacio Blanco (32N7W9) - Allison HZFC UN 123H - Pilot - ST00BP00													Offset Site Error:	5.0 usft
Survey Program: 570-3_MWD													Offset Well Error:	1.0 usft
Reference	Offset	Semi Major Axis		Distance		Rule Assigned:		Warning						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
3,903.0	3,153.4	3,879.6	3,335.9	18.1	16.7	-175.57	222.8	1,145.1	197.7	183.0	14.62	13.517		
3,928.0	3,153.4	3,902.7	3,344.4	18.6	17.2	-175.01	229.4	1,165.5	207.0	192.0	15.03	13.775		
3,953.0	3,153.5	3,921.0	3,351.2	19.2	17.6	-174.60	234.6	1,181.7	216.5	201.1	15.35	14.105		
3,978.0	3,153.6	3,921.0	3,351.2	19.8	17.6	-174.60	234.6	1,181.7	227.5	212.3	15.24	14.931		
4,000.0	3,153.6	3,921.0	3,351.2	20.3	17.6	-174.60	234.6	1,181.7	239.0	223.9	15.11	15.814		
4,003.0	3,153.6	3,921.0	3,351.2	20.4	17.6	-174.60	234.6	1,181.7	240.7	225.6	15.09	15.945		
4,028.0	3,153.7	3,921.0	3,351.2	21.0	17.6	-174.60	234.6	1,181.7	255.6	240.7	14.93	17.115		
4,053.0	3,153.8	3,921.0	3,351.2	21.6	17.6	-174.60	234.6	1,181.7	272.0	257.2	14.77	18.414		
4,078.0	3,153.8	3,921.0	3,351.2	22.2	17.6	-174.60	234.6	1,181.7	289.7	275.0	14.61	19.820		
4,100.0	3,153.9	3,921.0	3,351.2	22.7	17.6	-174.60	234.6	1,181.7	306.0	291.5	14.48	21.129		
4,103.0	3,153.9	3,921.0	3,351.2	22.8	17.6	-174.60	234.6	1,181.7	308.3	293.8	14.47	21.312		
4,128.0	3,153.9	3,921.0	3,351.2	23.4	17.6	-174.60	234.6	1,181.7	327.8	313.5	14.33	22.873		
4,153.0	3,154.0	3,921.0	3,351.2	23.9	17.6	-174.60	234.6	1,181.7	348.0	333.8	14.21	24.491		
4,178.0	3,154.1	3,921.0	3,351.2	24.5	17.6	-174.60	234.6	1,181.7	368.8	354.7	14.10	26.153		
4,200.0	3,154.1	3,921.0	3,351.2	25.1	17.6	-174.60	234.6	1,181.7	387.5	373.5	14.02	27.646		
4,203.0	3,154.1	3,921.0	3,351.2	25.1	17.6	-174.60	234.6	1,181.7	390.1	376.1	14.01	27.852		
4,228.0	3,154.2	3,921.0	3,351.2	25.7	17.6	-174.60	234.6	1,181.7	411.8	397.9	13.92	29.579		
4,253.0	3,154.3	3,921.0	3,351.2	26.3	17.6	-174.60	234.6	1,181.7	433.9	420.0	13.85	31.330		
4,278.0	3,154.3	3,921.0	3,351.2	26.9	17.6	-174.60	234.6	1,181.7	456.3	442.5	13.78	33.098		
4,300.0	3,154.4	3,921.0	3,351.2	27.4	17.6	-174.60	234.6	1,181.7	476.1	462.4	13.74	34.667		
4,303.0	3,154.4	3,921.0	3,351.2	27.5	17.6	-174.60	234.6	1,181.7	478.9	465.1	13.73	34.881		
4,328.0	3,154.5	3,921.0	3,351.2	28.1	17.6	-174.60	234.6	1,181.7	501.7	488.0	13.68	36.675		
4,352.6	3,154.5	3,921.0	3,351.2	28.7	17.6	-174.60	234.6	1,181.7	524.4	510.8	13.64	38.448		
4,353.0	3,154.5	3,921.0	3,351.2	28.7	17.6	-174.60	234.6	1,181.7	524.8	511.1	13.64	38.478		
4,374.3	3,154.5	3,921.0	3,351.2	29.2	17.6	-174.78	234.6	1,181.7	544.5	530.9	13.61	40.013		
4,378.0	3,154.5	3,921.0	3,351.2	29.3	17.6	-174.78	234.6	1,181.7	548.0	534.4	13.61	40.281		
4,400.0	3,154.4	3,921.0	3,351.2	29.8	17.6	-174.78	234.6	1,181.7	568.6	555.1	13.58	41.877		
4,403.0	3,154.4	3,921.0	3,351.2	29.8	17.6	-174.78	234.6	1,181.7	571.5	557.9	13.58	42.095		
4,428.0	3,154.3	3,921.0	3,351.2	30.4	17.6	-174.78	234.6	1,181.7	595.0	581.5	13.55	43.911		
4,453.0	3,154.1	3,921.0	3,351.2	31.0	17.6	-174.78	234.6	1,181.7	618.7	605.2	13.53	45.729		
4,478.0	3,154.0	3,921.0	3,351.2	31.6	17.6	-174.78	234.6	1,181.7	642.5	629.0	13.51	47.548		
4,500.0	3,153.9	3,921.0	3,351.2	32.1	17.6	-174.78	234.6	1,181.7	663.5	650.0	13.50	49.148		
4,503.0	3,153.9	3,921.0	3,351.2	32.2	17.6	-174.78	234.6	1,181.7	666.3	652.8	13.50	49.366		
4,528.0	3,153.8	3,921.0	3,351.2	32.8	17.6	-174.78	234.6	1,181.7	690.3	676.8	13.49	51.183		
4,553.0	3,153.7	3,921.0	3,351.2	33.4	17.6	-174.78	234.6	1,181.7	714.3	700.8	13.48	52.997		
4,578.0	3,153.5	3,921.0	3,351.2	34.0	17.6	-174.78	234.6	1,181.7	738.4	724.9	13.47	54.810		
4,600.0	3,153.4	3,921.0	3,351.2	34.5	17.6	-174.78	234.6	1,181.7	759.6	746.1	13.47	56.402		
4,603.0	3,153.4	3,921.0	3,351.2	34.6	17.6	-174.78	234.6	1,181.7	762.5	749.0	13.47	56.619		
4,628.0	3,153.3	3,921.0	3,351.2	35.2	17.6	-174.78	234.6	1,181.7	786.7	773.2	13.47	58.425		
4,653.0	3,153.2	3,921.0	3,351.2	35.7	17.6	-174.78	234.6	1,181.7	811.0	797.5	13.46	60.227		
4,678.0	3,153.1	3,921.0	3,351.2	36.3	17.6	-174.78	234.6	1,181.7	835.2	821.8	13.47	62.026		
4,700.0	3,153.0	3,921.0	3,351.2	36.9	17.6	-174.78	234.6	1,181.7	856.6	843.2	13.47	63.605		
4,703.0	3,153.0	3,921.0	3,351.2	36.9	17.6	-174.78	234.6	1,181.7	859.6	846.1	13.47	63.820		
4,728.0	3,152.8	3,921.0	3,351.2	37.5	17.6	-174.78	234.6	1,181.7	883.9	870.5	13.47	65.609		
4,753.0	3,152.7	3,921.0	3,351.2	38.1	17.6	-174.78	234.6	1,181.7	908.3	894.9	13.48	67.394		
4,778.0	3,152.6	3,921.0	3,351.2	38.7	17.6	-174.78	234.6	1,181.7	932.8	919.3	13.48	69.174		
4,800.0	3,152.5	3,921.0	3,351.2	39.2	17.6	-174.78	234.6	1,181.7	954.3	940.8	13.49	70.736		
4,803.0	3,152.5	3,921.0	3,351.2	39.3	17.6	-174.78	234.6	1,181.7	957.2	943.7	13.49	70.949		
4,828.0	3,152.4	3,921.0	3,351.2	39.9	17.6	-174.78	234.6	1,181.7	981.7	968.2	13.50	72.719		
4,853.0	3,152.2	3,921.0	3,351.2	40.5	17.6	-174.78	234.6	1,181.7	1,006.2	992.7	13.51	74.483		
4,878.0	3,152.1	3,921.0	3,351.2	41.1	17.6	-174.78	234.6	1,181.7	1,030.8	1,017.2	13.52	76.242		
4,900.0	3,152.0	3,921.0	3,351.2	41.6	17.6	-174.78	234.6	1,181.7	1,052.4	1,038.8	13.53	77.785		

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

Halliburton

Anticollision Report

Company:	Hilcorp Energy Company	Local Co-ordinate Reference:	Well Allison HZFC UN 123H
Project:	San Juan, NM	TVD Reference:	RKB-MSL= 6644 @ 6644.0usft
Reference Site:	Ignacio Blanco (32N7W9)	MD Reference:	RKB-MSL= 6644 @ 6644.0usft
Site Error:	5.0 usft	North Reference:	Grid
Reference Well:	Allison HZFC UN 123H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral 1 ST2	Database:	EDM 5000.17 Single User Db
Reference Design:	WP1	Offset TVD Reference:	Offset Datum

Offset Design: Ignacio Blanco (32N7W9) - Allison HZFC UN 123H - Pilot - ST00BP00												Offset Site Error:	5.0 usft
Survey Program: 570-3_MWD												Offset Well Error:	1.0 usft
Reference	Offset	Semi Major Axis		Distance		Rule Assigned:		Warning					
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
4,903.0	3,152.0	3,921.0	3,351.2	41.7	17.6	-174.78	234.6	1,181.7	1,055.3	1,041.8	13.53	77.996	
4,928.0	3,151.9	3,921.0	3,351.2	42.2	17.6	-174.78	234.6	1,181.7	1,079.9	1,066.4	13.54	79.743	
4,953.0	3,151.8	3,921.0	3,351.2	42.8	17.6	-174.78	234.6	1,181.7	1,104.5	1,090.9	13.55	81.485	
4,978.0	3,151.7	3,921.0	3,351.2	43.4	17.6	-174.78	234.6	1,181.7	1,129.1	1,115.5	13.57	83.222	
5,000.0	3,151.6	3,921.0	3,351.2	43.9	17.6	-174.78	234.6	1,181.7	1,150.8	1,137.2	13.58	84.745	
5,003.0	3,151.5	3,921.0	3,351.2	44.0	17.6	-174.78	234.6	1,181.7	1,153.7	1,140.2	13.58	84.952	
5,028.0	3,151.4	3,921.0	3,351.2	44.6	17.6	-174.78	234.6	1,181.7	1,178.4	1,164.8	13.60	86.677	
5,053.0	3,151.3	3,921.0	3,351.2	45.2	17.6	-174.78	234.6	1,181.7	1,203.1	1,189.4	13.61	88.396	
5,078.0	3,151.2	3,921.0	3,351.2	45.8	17.6	-174.78	234.6	1,181.7	1,227.7	1,214.1	13.63	90.109	
5,100.0	3,151.1	3,921.0	3,351.2	46.3	17.6	-174.78	234.6	1,181.7	1,249.5	1,235.8	13.64	91.611	
5,103.0	3,151.1	3,921.0	3,351.2	46.4	17.6	-174.78	234.6	1,181.7	1,252.4	1,238.8	13.64	91.816	
5,128.0	3,151.0	3,921.0	3,351.2	47.0	17.6	-174.78	234.6	1,181.7	1,277.1	1,263.5	13.66	93.517	
5,153.0	3,150.8	3,921.0	3,351.2	47.6	17.6	-174.78	234.6	1,181.7	1,301.8	1,288.2	13.67	95.211	
5,178.0	3,150.7	3,921.0	3,351.2	48.2	17.6	-174.78	234.6	1,181.7	1,326.6	1,312.9	13.69	96.900	
5,200.0	3,150.6	3,921.0	3,351.2	48.7	17.6	-174.78	234.6	1,181.7	1,348.3	1,334.6	13.71	98.381	
5,203.0	3,150.6	3,921.0	3,351.2	48.7	17.6	-174.78	234.6	1,181.7	1,351.3	1,337.6	13.71	98.583	
5,228.0	3,150.5	3,921.0	3,351.2	49.3	17.6	-174.78	234.6	1,181.7	1,376.0	1,362.3	13.72	100.260	
5,253.0	3,150.4	3,921.0	3,351.2	49.9	17.6	-174.78	234.6	1,181.7	1,400.8	1,387.0	13.74	101.930	
5,278.0	3,150.2	3,921.0	3,351.2	50.5	17.6	-174.78	234.6	1,181.7	1,425.5	1,411.8	13.76	103.595	
5,300.0	3,150.1	3,921.0	3,351.2	51.0	17.6	-174.78	234.6	1,181.7	1,447.3	1,433.6	13.78	105.055	
5,303.0	3,150.1	3,921.0	3,351.2	51.1	17.6	-174.78	234.6	1,181.7	1,450.3	1,436.5	13.78	105.253	
5,328.0	3,150.0	3,921.0	3,351.2	51.7	17.6	-174.78	234.6	1,181.7	1,475.1	1,461.3	13.80	106.906	
5,353.0	3,149.9	3,921.0	3,351.2	52.3	17.6	-174.78	234.6	1,181.7	1,499.9	1,486.1	13.82	108.552	
5,378.0	3,149.8	3,921.0	3,351.2	52.9	17.6	-174.78	234.6	1,181.7	1,524.7	1,510.8	13.84	110.192	
5,400.0	3,149.7	3,921.0	3,351.2	53.4	17.6	-174.78	234.6	1,181.7	1,546.5	1,532.6	13.85	111.631	
5,403.0	3,149.7	3,921.0	3,351.2	53.5	17.6	-174.78	234.6	1,181.7	1,549.5	1,535.6	13.86	111.826	
5,428.0	3,149.5	3,921.0	3,351.2	54.1	17.6	-174.78	234.6	1,181.7	1,574.3	1,560.4	13.88	113.454	
5,453.0	3,149.4	3,921.0	3,351.2	54.7	17.6	-174.78	234.6	1,181.7	1,599.1	1,585.2	13.90	115.076	
5,478.0	3,149.3	3,921.0	3,351.2	55.2	17.6	-174.78	234.6	1,181.7	1,623.9	1,610.0	13.92	116.692	
5,500.0	3,149.2	3,921.0	3,351.2	55.8	17.6	-174.78	234.6	1,181.7	1,645.7	1,631.8	13.93	118.109	
5,503.0	3,149.2	3,921.0	3,351.2	55.8	17.6	-174.78	234.6	1,181.7	1,648.7	1,634.8	13.94	118.302	
5,528.0	3,149.1	3,921.0	3,351.2	56.4	17.6	-174.78	234.6	1,181.7	1,673.5	1,659.6	13.96	119.906	
5,553.0	3,149.0	3,921.0	3,351.2	57.0	17.6	-174.78	234.6	1,181.7	1,698.4	1,684.4	13.98	121.503	
5,578.0	3,148.8	3,921.0	3,351.2	57.6	17.6	-174.78	234.6	1,181.7	1,723.2	1,709.2	14.00	123.095	
5,600.0	3,148.7	3,921.0	3,351.2	58.1	17.6	-174.78	234.6	1,181.7	1,745.1	1,731.1	14.02	124.490	
5,603.0	3,148.7	3,921.0	3,351.2	58.2	17.6	-174.78	234.6	1,181.7	1,748.1	1,734.0	14.02	124.680	
5,628.0	3,148.6	3,921.0	3,351.2	58.8	17.6	-174.78	234.6	1,181.7	1,772.9	1,758.9	14.04	126.260	
5,653.0	3,148.5	3,921.0	3,351.2	59.4	17.6	-174.78	234.6	1,181.7	1,797.8	1,783.7	14.06	127.834	
5,678.0	3,148.4	3,921.0	3,351.2	60.0	17.6	-174.78	234.6	1,181.7	1,822.6	1,808.5	14.08	129.401	
5,700.0	3,148.3	3,921.0	3,351.2	60.5	17.6	-174.78	234.6	1,181.7	1,844.5	1,830.4	14.10	130.776	
5,703.0	3,148.2	3,921.0	3,351.2	60.6	17.6	-174.78	234.6	1,181.7	1,847.5	1,833.4	14.11	130.963	
5,728.0	3,148.1	3,921.0	3,351.2	61.2	17.6	-174.78	234.6	1,181.7	1,872.3	1,858.2	14.13	132.518	
5,753.0	3,148.0	3,921.0	3,351.2	61.7	17.6	-174.78	234.6	1,181.7	1,897.2	1,883.0	14.15	134.068	
5,778.0	3,147.9	3,921.0	3,351.2	62.3	17.6	-174.78	234.6	1,181.7	1,922.1	1,907.9	14.17	135.612	
5,800.0	3,147.8	3,921.0	3,351.2	62.9	17.6	-174.78	234.6	1,181.7	1,943.9	1,929.8	14.19	136.966	
5,803.0	3,147.8	3,921.0	3,351.2	62.9	17.6	-174.78	234.6	1,181.7	1,946.9	1,932.7	14.20	137.150	
5,828.0	3,147.7	3,921.0	3,351.2	63.5	17.6	-174.78	234.6	1,181.7	1,971.8	1,957.6	14.22	138.682	
5,853.0	3,147.5	3,921.0	3,351.2	64.1	17.6	-174.78	234.6	1,181.7	1,996.7	1,982.4	14.24	140.208	
5,878.0	3,147.4	3,921.0	3,351.2	64.7	17.6	-174.78	234.6	1,181.7	2,021.6	2,007.3	14.26	141.728	
5,900.0	3,147.3	3,921.0	3,351.2	65.2	17.6	-174.78	234.6	1,181.7	2,043.5	2,029.2	14.28	143.061	
5,903.0	3,147.3	3,921.0	3,351.2	65.3	17.6	-174.78	234.6	1,181.7	2,046.5	2,032.2	14.29	143.243	
5,928.0	3,147.2	3,921.0	3,351.2	65.9	17.6	-174.78	234.6	1,181.7	2,071.3	2,057.0	14.31	144.751	

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

Halliburton

Anticollision Report

Company:	Hilcorp Energy Company	Local Co-ordinate Reference:	Well Allison HZFC UN 123H
Project:	San Juan, NM	TVD Reference:	RKB-MSL= 6644 @ 6644.0usft
Reference Site:	Ignacio Blanco (32N7W9)	MD Reference:	RKB-MSL= 6644 @ 6644.0usft
Site Error:	5.0 usft	North Reference:	Grid
Reference Well:	Allison HZFC UN 123H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral 1 ST2	Database:	EDM 5000.17 Single User Db
Reference Design:	WP1	Offset TVD Reference:	Offset Datum

Offset Design: Ignacio Blanco (32N7W9) - Allison HZFC UN 123H - Pilot - ST00BP00												Offset Site Error: 5.0 usft	
Survey Program: 570-3_MWD				Rule Assigned:								Offset Well Error: 1.0 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)			
5,953.0	3,147.1	3,921.0	3,351.2	66.5	17.6	-174.78	234.6	1,181.7	2,096.2	2,081.9	14.33	146.254	
5,978.0	3,146.9	3,921.0	3,351.2	67.1	17.6	-174.78	234.6	1,181.7	2,121.1	2,106.8	14.36	147.751	
6,000.0	3,146.8	3,921.0	3,351.2	67.6	17.6	-174.78	234.6	1,181.7	2,143.0	2,128.7	14.38	149.064	
6,003.0	3,146.8	3,921.0	3,351.2	67.7	17.6	-174.78	234.6	1,181.7	2,146.0	2,131.6	14.38	149.243	
6,028.0	3,146.7	3,921.0	3,351.2	68.2	17.6	-174.78	234.6	1,181.7	2,170.9	2,156.5	14.40	150.728	
6,053.0	3,146.6	3,921.0	3,351.2	68.8	17.6	-174.78	234.6	1,181.7	2,195.8	2,181.4	14.43	152.208	
6,078.0	3,146.5	3,921.0	3,351.2	69.4	17.6	-174.78	234.6	1,181.7	2,220.7	2,206.3	14.45	153.682	
6,100.0	3,146.4	3,921.0	3,351.2	69.9	17.6	-174.78	234.6	1,181.7	2,242.6	2,228.2	14.47	154.975	
6,103.0	3,146.4	3,921.0	3,351.2	70.0	17.6	-174.78	234.6	1,181.7	2,245.6	2,231.2	14.47	155.151	
6,128.0	3,146.2	3,921.0	3,351.2	70.6	17.6	-174.78	234.6	1,181.7	2,270.5	2,256.0	14.50	156.614	
6,153.0	3,146.1	3,921.0	3,351.2	71.2	17.6	-174.78	234.6	1,181.7	2,295.4	2,280.9	14.52	158.071	
6,178.0	3,146.0	3,921.0	3,351.2	71.8	17.6	-174.78	234.6	1,181.7	2,320.4	2,305.8	14.55	159.523	
6,200.0	3,145.9	3,921.0	3,351.2	72.3	17.6	-174.78	234.6	1,181.7	2,342.3	2,327.7	14.57	160.796	
6,203.0	3,145.9	3,921.0	3,351.2	72.4	17.6	-174.78	234.6	1,181.7	2,345.3	2,330.7	14.57	160.969	
6,228.0	3,145.8	3,921.0	3,351.2	73.0	17.6	-174.78	234.6	1,181.7	2,370.2	2,355.6	14.59	162.409	
6,253.0	3,145.7	3,921.0	3,351.2	73.6	17.6	-174.78	234.6	1,181.7	2,395.1	2,380.5	14.62	163.844	
6,278.0	3,145.5	3,921.0	3,351.2	74.2	17.6	-174.78	234.6	1,181.7	2,420.0	2,405.4	14.64	165.274	
6,300.0	3,145.4	3,921.0	3,351.2	74.7	17.6	-174.78	234.6	1,181.7	2,441.9	2,427.3	14.66	166.527	
6,303.0	3,145.4	3,921.0	3,351.2	74.7	17.6	-174.78	234.6	1,181.7	2,444.9	2,430.3	14.67	166.698	
6,328.0	3,145.3	3,921.0	3,351.2	75.3	17.6	-174.78	234.6	1,181.7	2,469.9	2,455.2	14.69	168.116	
6,353.0	3,145.2	3,921.0	3,351.2	75.9	17.6	-174.78	234.6	1,181.7	2,494.8	2,480.1	14.72	169.529	
6,378.0	3,145.1	3,921.0	3,351.2	76.5	17.6	-174.78	234.6	1,181.7	2,519.7	2,505.0	14.74	170.937	
6,400.0	3,145.0	3,921.0	3,351.2	77.0	17.6	-174.78	234.6	1,181.7	2,541.6	2,526.9	14.76	172.171	
6,403.0	3,144.9	3,921.0	3,351.2	77.1	17.6	-174.78	234.6	1,181.7	2,544.6	2,529.9	14.77	172.339	
6,428.0	3,144.8	3,921.0	3,351.2	77.7	17.6	-174.78	234.6	1,181.7	2,569.6	2,554.8	14.79	173.736	
6,453.0	3,144.7	3,921.0	3,351.2	78.3	17.6	-174.78	234.6	1,181.7	2,594.5	2,579.7	14.81	175.127	
6,478.0	3,144.6	3,921.0	3,351.2	78.9	17.6	-174.78	234.6	1,181.7	2,619.4	2,604.6	14.84	176.513	
6,500.0	3,144.5	3,921.0	3,351.2	79.4	17.6	-174.78	234.6	1,181.7	2,641.3	2,626.5	14.86	177.729	
6,503.0	3,144.5	3,921.0	3,351.2	79.5	17.6	-174.78	234.6	1,181.7	2,644.3	2,629.5	14.86	177.894	
6,528.0	3,144.4	3,921.0	3,351.2	80.1	17.6	-174.78	234.6	1,181.7	2,669.3	2,654.4	14.89	179.270	
6,553.0	3,144.2	3,921.0	3,351.2	80.7	17.6	-174.78	234.6	1,181.7	2,694.2	2,679.3	14.91	180.640	
6,578.0	3,144.1	3,921.0	3,351.2	81.3	17.6	-174.78	234.6	1,181.7	2,719.1	2,704.2	14.94	182.005	
6,600.0	3,144.0	3,921.0	3,351.2	81.8	17.6	-174.78	234.6	1,181.7	2,741.1	2,726.1	14.96	183.202	
6,603.0	3,144.0	3,921.0	3,351.2	81.8	17.6	-174.78	234.6	1,181.7	2,744.1	2,729.1	14.97	183.365	
6,628.0	3,143.9	3,921.0	3,351.2	82.4	17.6	-174.78	234.6	1,181.7	2,769.0	2,754.0	14.99	184.719	
6,653.0	3,143.8	3,921.0	3,351.2	83.0	17.6	-174.78	234.6	1,181.7	2,794.0	2,778.9	15.02	186.069	
6,678.0	3,143.6	3,921.0	3,351.2	83.6	17.6	-174.78	234.6	1,181.7	2,818.9	2,803.9	15.04	187.413	
6,700.0	3,143.5	3,921.0	3,351.2	84.1	17.6	-174.78	234.6	1,181.7	2,840.8	2,825.8	15.06	188.592	
6,703.0	3,143.5	3,921.0	3,351.2	84.2	17.6	-174.78	234.6	1,181.7	2,843.8	2,828.8	15.07	188.752	
6,728.0	3,143.4	3,921.0	3,351.2	84.8	17.6	-174.78	234.6	1,181.7	2,868.8	2,853.7	15.09	190.086	
6,753.0	3,143.3	3,921.0	3,351.2	85.4	17.6	-174.78	234.6	1,181.7	2,893.7	2,878.6	15.12	191.415	
6,778.0	3,143.2	3,921.0	3,351.2	86.0	17.6	-174.78	234.6	1,181.7	2,918.7	2,903.5	15.14	192.739	
6,800.0	3,143.1	3,921.0	3,351.2	86.5	17.6	-174.78	234.6	1,181.7	2,940.6	2,925.4	15.17	193.900	
6,803.0	3,143.1	3,921.0	3,351.2	86.6	17.6	-174.78	234.6	1,181.7	2,943.6	2,928.4	15.17	194.058	
6,828.0	3,142.9	3,921.0	3,351.2	87.2	17.6	-174.78	234.6	1,181.7	2,968.6	2,953.4	15.19	195.371	
6,853.0	3,142.8	3,921.0	3,351.2	87.8	17.6	-174.78	234.6	1,181.7	2,993.5	2,978.3	15.22	196.680	

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

Halliburton

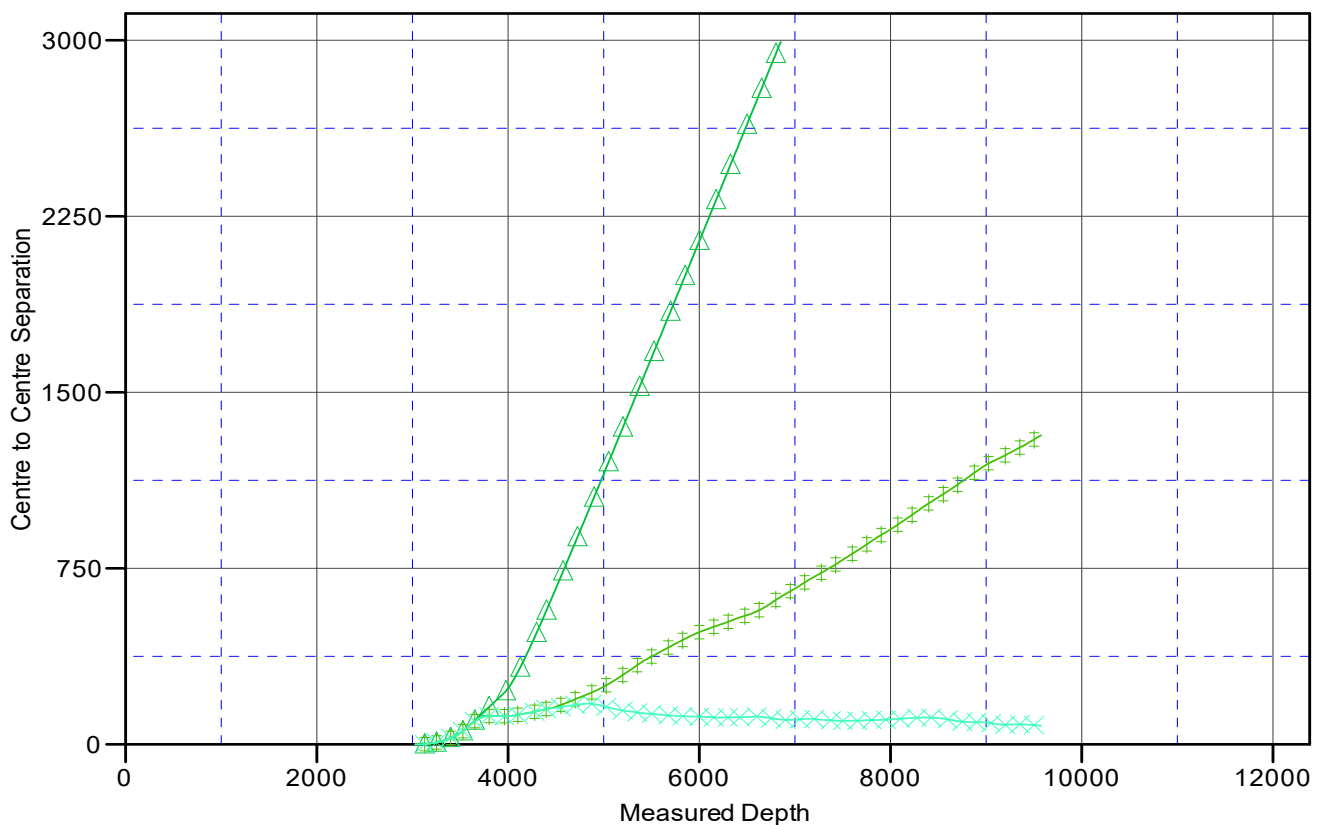
Anticollision Report

Company:	Hilcorp Energy Company	Local Co-ordinate Reference:	Well Allison HZFC UN 123H
Project:	San Juan, NM	TVD Reference:	RKB-MSL= 6644 @ 6644.0usft
Reference Site:	Ignacio Blanco (32N7W9)	MD Reference:	RKB-MSL= 6644 @ 6644.0usft
Site Error:	5.0 usft	North Reference:	Grid
Reference Well:	Allison HZFC UN 123H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral 1 ST2	Database:	EDM 5000.17 Single User Db
Reference Design:	WP1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to RKB-MSL= 6644 @ 6644.0usft
 Offset Depths are relative to Offset Datum
 Central Meridian is 107° 50' 0.000 W

Coordinates are relative to: Allison HZFC UN 123H
 Coordinate System is US State Plane 1927 (Exact solution), New Mexico West 30
 Grid Convergence at Surface is: 0.16°

Ladder Plot



LEGEND

▲ Allison HZFC UN 123H, Pilot, ST00BP00 V0
 ● Allison HZFC UN 123H, Lateral 1 ST1, Lateral 1 ST1 V0
 × Allison HZFC UN 123H, Lateral 1, Lateral 1 V0

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

Halliburton

Anticollision Report

Company:	Hilcorp Energy Company	Local Co-ordinate Reference:	Well Allison HZFC UN 123H
Project:	San Juan, NM	TVD Reference:	RKB-MSL= 6644 @ 6644.0usft
Reference Site:	Ignacio Blanco (32N7W9)	MD Reference:	RKB-MSL= 6644 @ 6644.0usft
Site Error:	5.0 usft	North Reference:	Grid
Reference Well:	Allison HZFC UN 123H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral 1 ST2	Database:	EDM 5000.17 Single User Db
Reference Design:	WP1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to RKB-MSL= 6644 @ 6644.0usft

Offset Depths are relative to Offset Datum

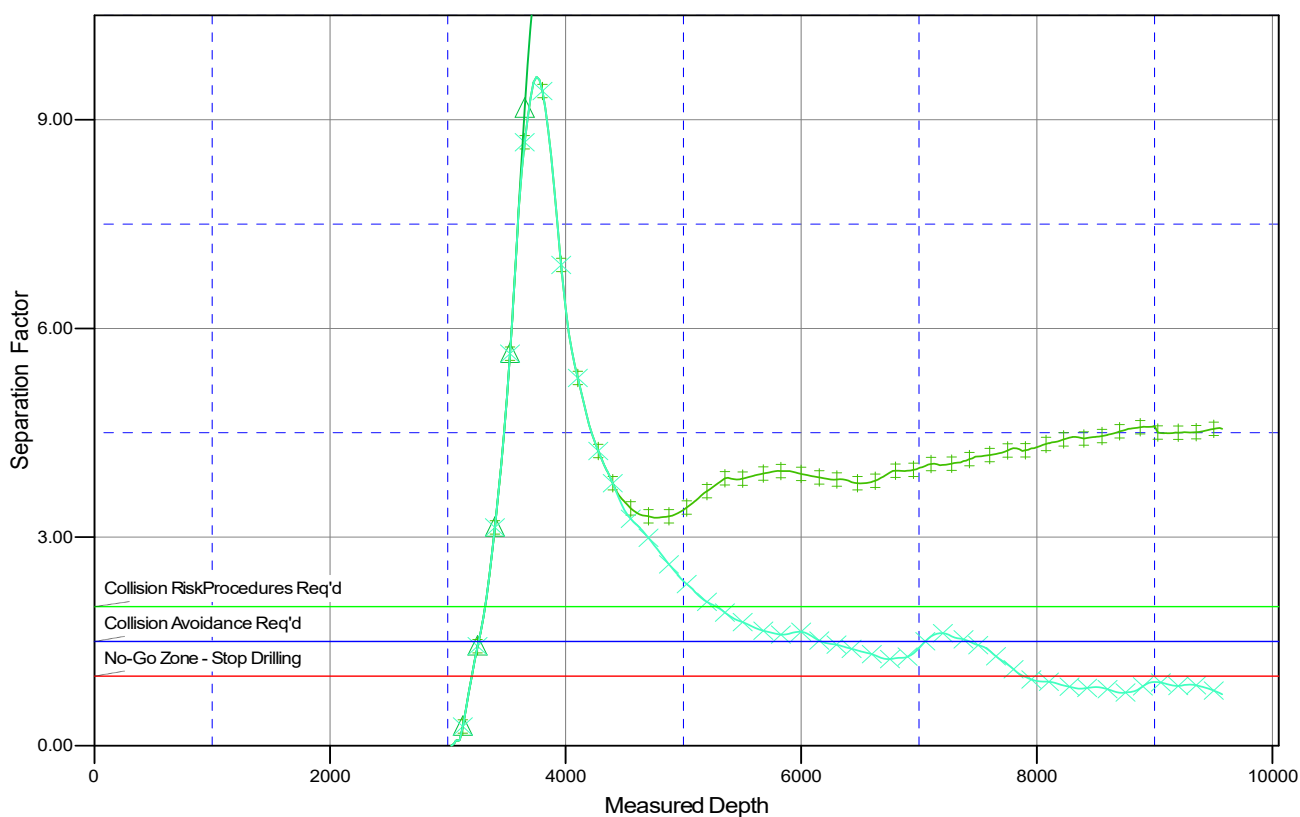
Central Meridian is 107° 50' 0.000 W

Coordinates are relative to: Allison HZFC UN 123H

Coordinate System is US State Plane 1927 (Exact solution), New Mexico West 30

Grid Convergence at Surface is: 0.16°

Separation Factor Plot



LEGEND

▲ Allison HZFC UN 123H, Pilot, ST00BP00 V0

● Allison HZFC UN 123H, Lateral 1 ST1, Lateral 1 ST1 V0

✕ Allison HZFC UN 123H, Lateral 1, Lateral 1 V0

**UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
FARMINGTON DISTRICT OFFICE
6251 COLLEGE BLVD.
FARMINGTON, NEW MEXICO 87402**

AFMSS 2 Sundry ID 2740465

Attachment to Notice of Intent

Well: Allison Unit 123H

CONDITIONS OF APPROVAL

1. The BLM Inspection and Enforcement Section (I&E), phone number (505-564-7750), is to be notified at least 24 hours in advance of BOP test, spudding, cementing, or plugging operations so that a BLM representative may witness the operations.

K. Rennick 07/12/2023

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 239125

CONDITIONS

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 239125
	Action Type: [C-103] NOI Recompletion (C-103E)

CONDITIONS

Created By	Condition	Condition Date
dmcclure	Notify NMOCD 24 Hours Prior to beginning operations	8/17/2023
dmcclure	NSP-2108 will need to be amended	8/17/2023
dmcclure	Once work is conducted, submit a C-104 Packet with the C-103T and amended C-102, C-104, and C-105	8/17/2023