

District I

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

District II

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

District III

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

District IV

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

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

Form C-101

August 1, 2011

Permit 350202

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

1. Operator Name and Address HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002		2. OGRID Number 372171
		3. API Number 30-045-38326
4. Property Code 318864	5. Property Name ALLISON UNIT	6. Well No. 611H

7. Surface Location

UL - Lot F	Section 12	Township 32N	Range 07W	Lot Idn 3	Feet From 154	N/S Line N	Feet From 1625	E/W Line W	County San Juan
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8. Proposed Bottom Hole Location

UL - Lot H	Section 8	Township 32N	Range 06W	Lot Idn H	Feet From 733	N/S Line N	Feet From 358	E/W Line E	County San Juan
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9. Pool Information

BASIN MANCOS	97232
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Additional Well Information

11. Work Type New Well	12. Well Type GAS	13. Cable/Rotary	14. Lease Type Private	15. Ground Level Elevation 6352
16. Multiple N	17. Proposed Depth 19774	18. Formation Mancos Formation	19. Contractor	20. Spud Date
Depth to Ground water		Distance from nearest fresh water well		Distance to nearest surface water

☒ We will be using a closed-loop system in lieu of lined pits**21. Proposed Casing and Cement Program**

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surf	17.5	13.375	54.5	350	414	0
Int1	12.25	9.625	43.5	6159	1338	0
Prod	8.5	5.5	20	19774	2753	5000

Casing/Cement Program: Additional Comments

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22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Double Ram	4200	5000	

23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief. I further certify I have complied with 19.15.14.9 (A) NMAC ☒ and/or 19.15.14.9 (B) NMAC ☒ if applicable.	OIL CONSERVATION DIVISION	
Signature:		
Printed Name: Electronically filed by Jodi L. Curtis	Approved By: Ward Rikala	
Title:	Title:	
Email Address: jcurtis@hilcorp.com	Approved Date: 9/21/2023	Expiration Date: 9/21/2025
Date: 9/14/2023	Phone: 713-289-2741	Conditions of Approval Attached

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District IV
1220 S. St. Francis Drive, Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

OIL CONSERVATION DIVISION
1220 South St. Francis Drive
Santa Fe, NM 87505

Submit one copy to
Appropriate District Office

☐ AMENDED REPORT

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom-hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature *Amanda Walker* Date 9/14/2023

Amanda Walker
Printed Name
mwalker@hilcorp.com
E-mail Address

WELL LOCATION AND ACREAGE DEDICATION PLAT

⁴ API Number 30-045-38326	² Pool Code 97232	³ Pool Name BASIN MANCOS
⁴ Property Code 318864	⁵ Property Name ALLISON UNIT	⁶ Well Number 611H
⁷ GRID No. 372171	⁸ Operator Name HILCORP ENERGY COMPANY	⁹ Elevation 6352'

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
F	12	32N	7W	3	154	NORTH	1625	WEST	SAN JUAN

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	8	32N	6W		733	NORTH	358	EAST	SAN JUAN

¹² Dedicated Acres 505.84	NE/4 (aka Lots 1-2) Section 12, T32N R7W N/2 (aka Lots 1-5) SE/4 NW/4, S/2 NE/4 Section 7, T32N R6W N/2 (aka Lots 1-4, S/2 N/2) Section 8, T32N R6W	¹³ Joint or Infill ¹⁴ Consolidation Code ¹⁵ Order No.
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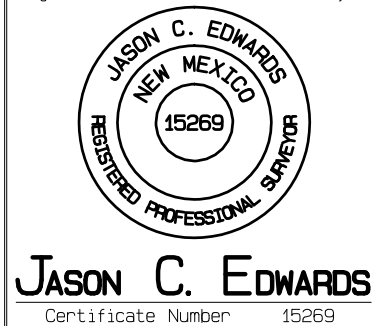
NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION
UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A
NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

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.

Date Revised: SEPTEMBER 2, 2023
Date of Survey: JULY 19, 2023

Signature and Seal of Professional Surveyor



SURFACE LOCATION (A)
154' FNL 1625' FWL
SEC 12, T32N, R7W
LAT 36.999629°N
LONG -107.520404°W
DATUM: NAD1927

S67°48.0'E
1490.9'

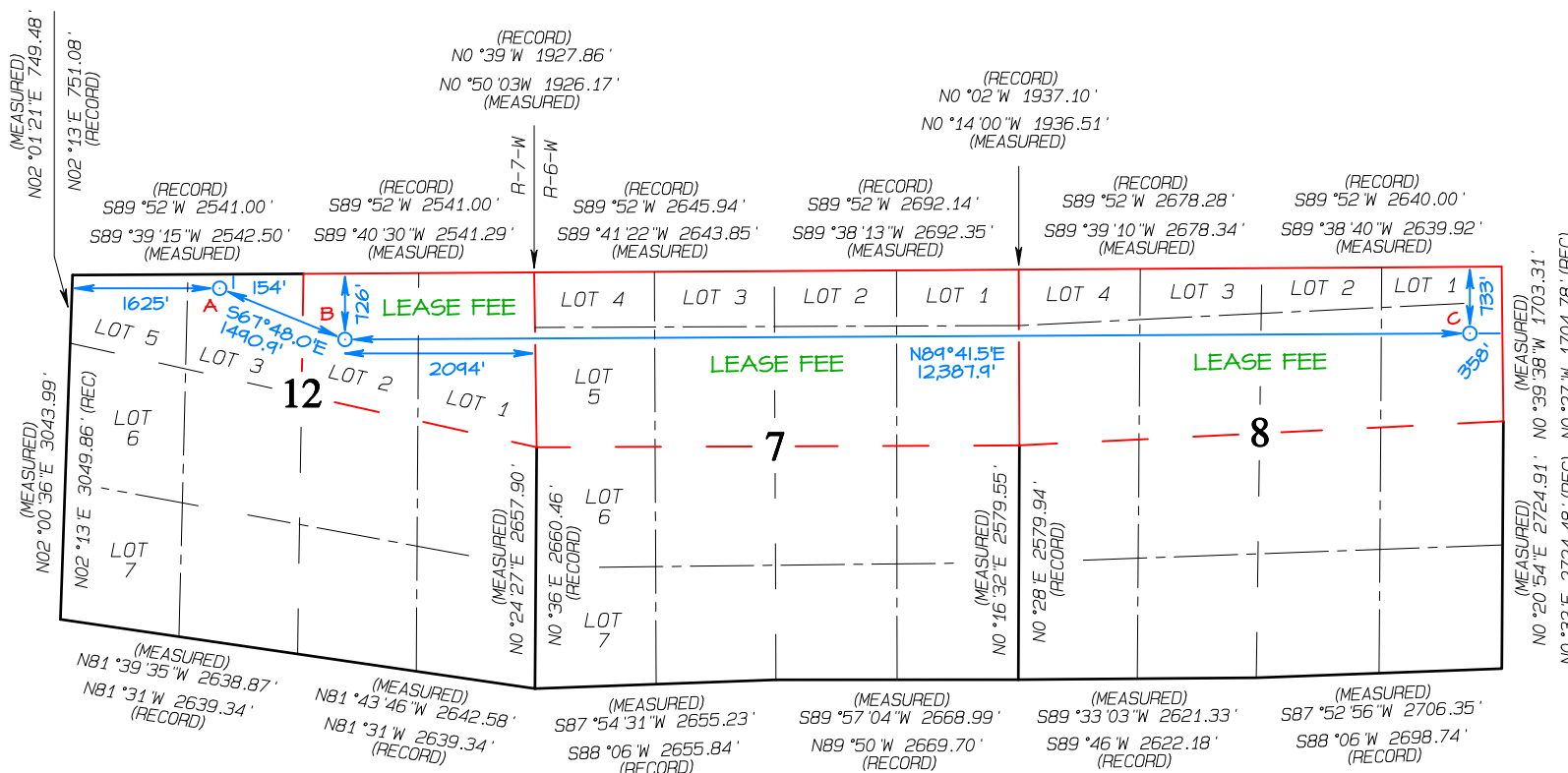
FIRST TAKE POINT (B)
726' FNL 2094' FEL
SEC 12, T32N, R7W
LAT 36.998069°N
LONG -107.515684°W
DATUM: NAD1927

LAT 36.998074°N
LONG -107.516291°W
DATUM: NAD1983

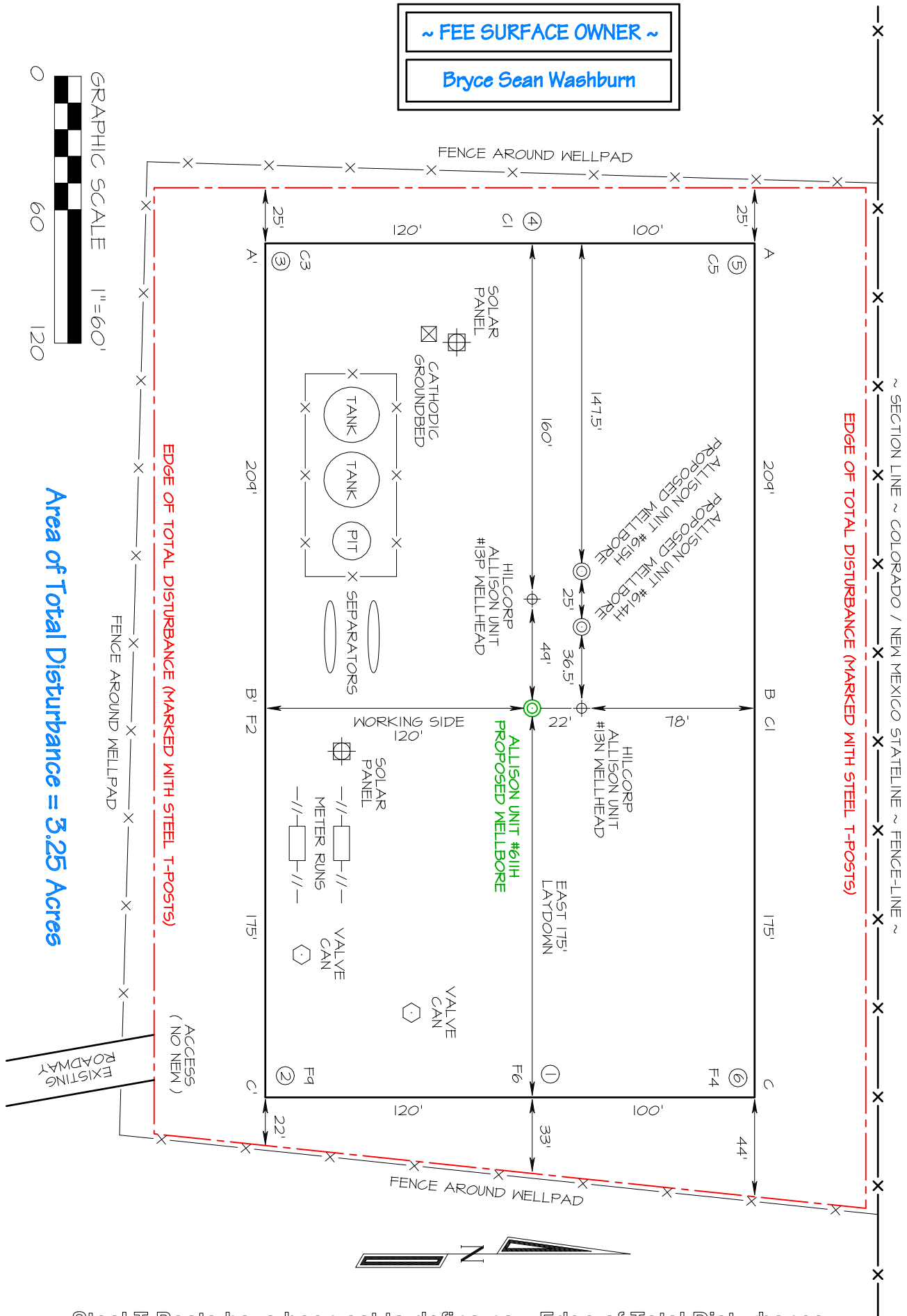
N89°41.5'E
12387.9'

END-OF-LATERAL (C)
733' FNL 358' FEL
SEC 8, T32N, R6W
LAT 36.998131°N
LONG -107.473264°W
DATUM: NAD1927

LAT 36.998136°N
LONG -107.473869°W
DATUM: NAD1983



HILCORP ENERGY COMPANY ALLISON UNIT #611H
 154' FNL & 1625' FWL, SECTION 12, T32N, R7W, NMPM
 SAN JUAN COUNTY, NEW MEXICO ELEVATION: 6352'
 LAT 36.999634°N LONG -107.521011°W DATUM NAD1983



Area of Total Disturbance = 3.25 Acres

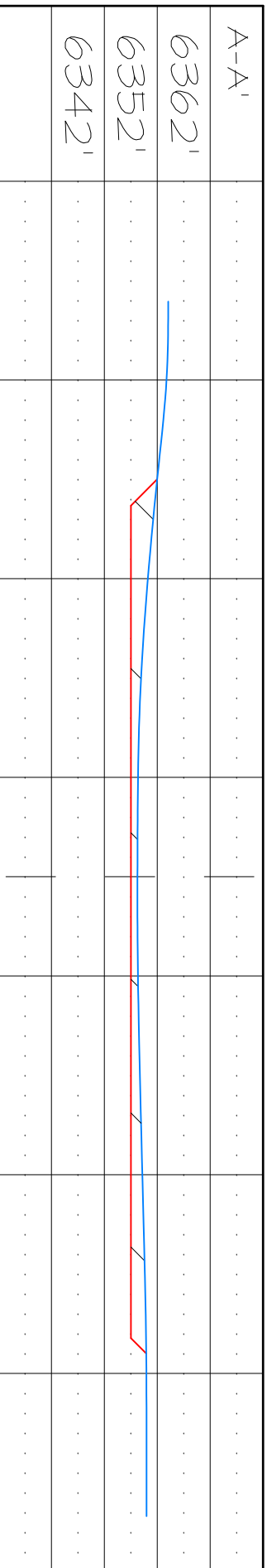
Steel T-Posts have been set to define new Edge of Total Disturbance limits which are 50' offset from the edge of the staked wellpad.

HILL CORP ENERGY COMPANY ALLISON UNIT #611H 154' FNL & 1625' FWL, SECTION 12, T32N, R7W, NMPM SAN JUAN COUNTY, NEW MEXICO ELEVATION: 6352'

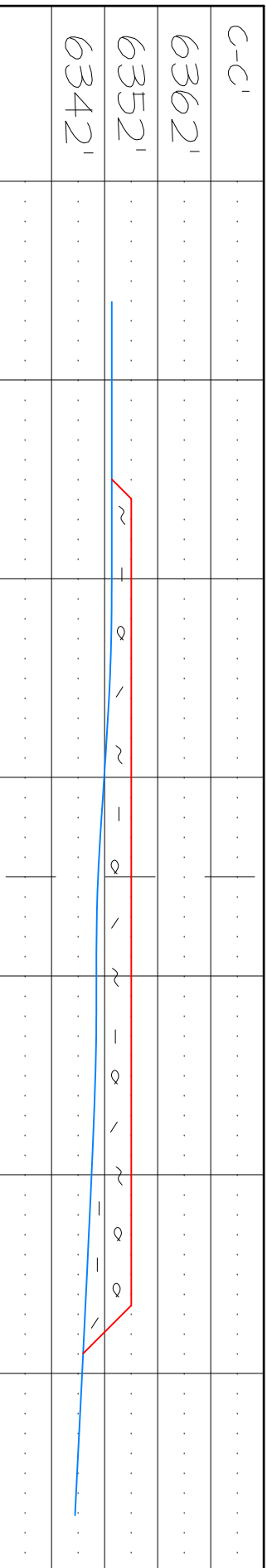
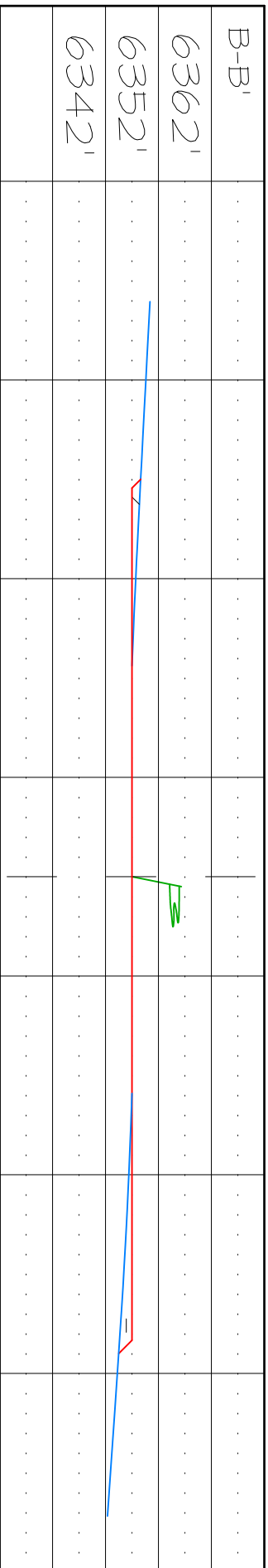
HORIZONTAL SCALE 1"=40'

C/L

VERTICAL SCALE 1"=30'



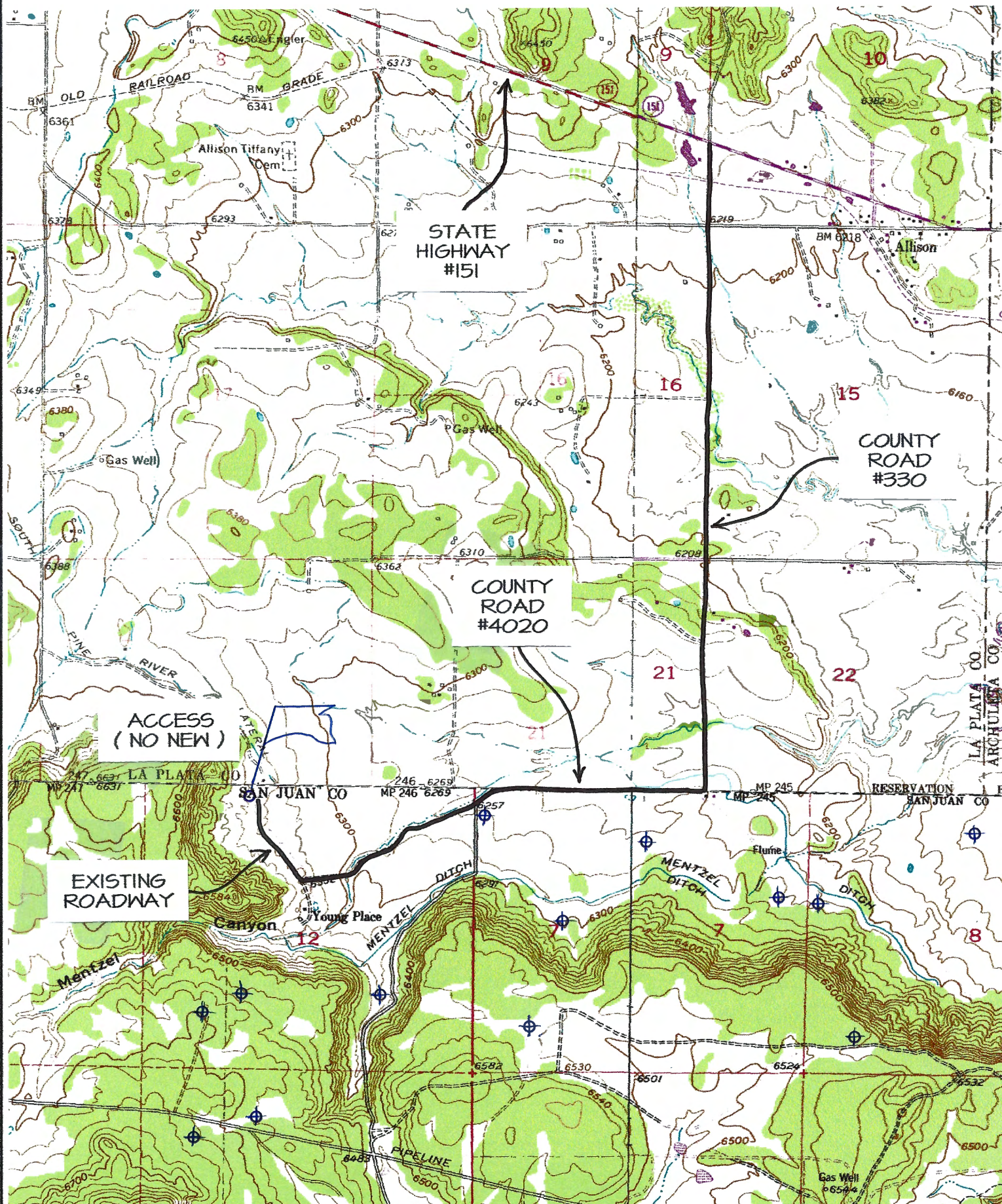
C/L



EDWARDS SURVEYING, INC. IS NOT LIABLE FOR LOCATION OF UNDERGROUND UTILITIES OR PIPELINES.
CONTRACTOR SHOULD CONTACT ONE-CALL FOR LOCATION OF ANY MARKED OR UNMARKED UNDERGROUND
UTILITIES OR PIPELINES ON WELLPAD AND/OR ACCESS ROAD AT LEAST TWO WORKING DAYS PRIOR TO CONSTRUCTION.

HILCORP ENERGY COMPANY ALLISON UNIT #611H

154' FNL & 1625' FWL, SECTION 12, T32N, R7W, N.M.P.M.
SAN JUAN COUNTY, NEW MEXICO



TOPO NAME : BURNT MESA

⊕ PRODUCING WELL

⊗ PLUGGED & ABANDONED WELL

Directions from Intersection of State Hwy 172 & State Hwy 151 in Ignacio, CO

to Hilcorp Energy Company Allison Unit #611H

154' FNL & 1625' FWL, Section 12, T32N, R7W, N.M.P.M., San Juan County, NM

Latitude 36.999634°N Longitude -107.521011°W Datum: NAD1983

From the intersection of State Hwy 172 & State Hwy 151 in Ignacio, CO, travel Easterly on State Hwy 151 for 12.0 miles to County Road #330:

Go Right (Southerly) on County Road #330 for 1.9 miles to County Road #4020;

Go Right (Westerly) on County Road #4020 for 0.7 miles to fork in roadway;

Go Right (South-westerly) exiting County Road #4020 for 0.6 miles to fork in roadway:

Go Right (North-westerly) for 0.3 miles to Hilcorp Energy Company Allison Unit #611H staked location which overlaps an existing wellpad.

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

Form APD Conditions

Permit 350202

PERMIT CONDITIONS OF APPROVAL

Operator Name and Address: HILCORP ENERGY COMPANY [372171] 1111 Travis Street Houston, TX 77002	API Number: 30-045-38326
	Well: ALLISON UNIT #611H

OCD Reviewer	Condition
ward.rikala	Notify OCD 24 hours prior to casing & cement
ward.rikala	Will require a File As Drilled C-102 and a Directional Survey with the C-104
ward.rikala	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string
ward.rikala	Cement is required to circulate on both surface and intermediate1 strings of casing
ward.rikala	Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system
ward.rikala	The Operator is to notify NMOCD by sundry (Form C-103) within ten (10) days of the well being spud
ward.rikala	Instead of spotting the three plugs to plug the pilot hole, NM OCD would like to see a continuous cement plug to insure all of the strata is properly isolated below the Mancos.

San Juan County, NM

Allison Unit #611H

Hilcorp Energy Company

Technical Drilling Plan (Rev. 0)

Hilcorp Energy Company proposes to drill and complete the referenced horizontal well targeting the Mancos Shale formation.

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

1. Location

Date:	September 11, 2023	Pool:	Basin Mancos
Well Name:	Allison Unit #611H	Ground Elevation (ft. MSL):	6,352'
Surface Hole Location:	36.999634° N, -107.521011° W NAD83	Total Measured Depth (ft.)	19,774'
Bottom Hole Location:	36.9998136° N, -107.473869° 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	2,062	Possible Water
Kirtland	2,162	Gas & Water
Fruitland	2,576	Gas & Water
Pictured Cliffs	2,960	Possible Gas
Lewis Shale	3,470	None
Cliffhouse	4,899	Possible Gas & Water
Menefee	5,260	None
Point Lookout	5,466	Gas
Mancos	5,988	Gas
Gallup	7,114	Water & Gas
Juana Lopez	7,259	Water & Gas
Carlile	7,368	Water & Gas
Greenhorn	7,544	Water & Gas
Graneros	7,601	Water & Gas
Dakota	7721	Water & Gas

San Juan County, NM

Allison Unit #611H

Hilcorp Energy Company

3. Pressure Control Equipment

See Appendix A for BOP equipment and choke manifold schematics.

- 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 5M standards.
- All equipment will have 5M pressure rating at a minimum.
- 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 5,000 psi (High) for 10 minutes. Pressure test surface casing to 600 psi for 30 minutes and intermediate casing to 1,500 psi for 30 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. A full BOP test will be conducted when initially installed for the first well on the pad or if a seal subject to test pressure is broken, following related repairs, and at a minimum of 30-day intervals. A BOPE shell test only will be conducted for subsequent wells on the pad when seals subject to pressure have not been broken, repaired, and fall within the 30-day interval of the first full test.

4. Casing & Cement Program

A. Proposed Casing Program:

Proposed Casing Design								
Casing String	Hole Size	Casing Size	Weight/Grade	Top Depth (MD/TVD)	Shoe Depth (MD/TVD)	Collapse	Yield	Joint Strength
Surface	17-1/2"	13-3/8"	54.5#, J55 or equiv, LTC/BTC	0'	350' / 350'	1,130 psi	2,730 psi	514,000 lbs
Intermediate	12-1/4"	9-5/8"	43.5# L80 or equiv, LTC/BTC	0'	6,159' / 6,088'	3,810 psi	6,330 psi	737,000 lbs
Production	8-1/2"	5-1/2"	20.0#, P110 or equiv, LTC/BTC	0'	19,774' / 6,851'	11,080 psi	12,360 psi	548,000 lbs

San Juan County, NM

Allison Unit #611H



Proposed Casing Design Safety Factors				
Casing String	Burst Design SF	Collapse Design SF	Joint Tensile Design SF	Connection Tensile Design SF
Surface	16.7	8.8	44.7	47.7
Intermediate	1.739	1.257	3.8	3.0
Production	3.0	3.1	1.6	1.7

Notes:

- Production casing will be run from surface to TD.
- If the 8-1/2" hole is not drilled to the total planned measured depth, the production casing setting depth and length will be adjusted accordingly.
- Casing Design Parameters – Designed for full evacuation. Mud Weights used for calculations: Surface = 9.0 ppg, Intermediate = 11.5 ppg, Production = 12.0 ppg. Burst: 1.15; Collapse: 1.125; Tensile: 1.6.
 - o Burst: (Casing Burst Rating) / (Maximum Burst Load (Max MW x TVD x .052))
 - o Collapse: (Full hydrostatic of MW in annulus) – (Hydrostatic of vacated casing, 0.1 psi/ft)
 - o Tensile: (Tensile rating) / (measured depth x casing weight)
- A toe initiation sliding sleeve will be installed at the toe of the production casing.

B. Proposed Centralizer Program:

Proposed Centralizer Program	
Interval	Centralizers & Placement
Surface	1 centralizer per joint on bottom 3 joints.
Intermediate	1 centralizer per joint in shoe track. 1 centralizer every 3 rd joint to surface.
Production	Centralizers determined by hole conditions from TD to top of cement.

C. Proposed Cement Program:

Proposed Cement Design							
Interval	Depth (ft. MD)	Lead/Tail	Volume (ft ³)	Sacks	Slurry	Density	Planned TOC
Surface	350'	Tail	486 ft ³	414	Premium Cement – 100% OH Excess 2% CaCl, 0.125 lb/sk Poly E Flake 1.175 ft ³ /sk – 5.14 gal/sk	15.8 ppg	Surface
Intermediate	6,159'	Lead	1,947 ft ³	987	HalCem Cement – 25% OH Excess 0.3% HR-5, 0.125 lb/sk Poly E Flake 1.974 ft ³ /sk – 10.28 gal/sk	12.3 ppg	Surface
		Tail	454 ft ³	351	VariCem Cement – 25 % OH Excess 0.1% HR-5, 0.125 lb/sk Poly E Flake	13.5 ppg	5,000'

San Juan County, NM

Allison Unit #611H



					1.295 ft ³ /sk – 5.69 gal/sk		
Production	19,774'	Lead	3,732 ft ³	2,753	BondCem Cement – 10% OH Excess 0.3% Super CBL, 0.1% HR-601 1.356 ft ³ /sk – 6.08 gal/sk	13.3 ppg	5,000'

Notes:

- The cement slurry additives may be adjusted to accommodate required pump and compressive test times.
- Actual cement volumes will be determined and may be adjusted onsite based on well conditions.
- For the intermediate hole section, a 2-stage cement job may be performed if hole conditions dictate. If needed, the stage tool will be placed appropriately as conditions indicate.
- Cement will be circulated to surface on surface and intermediate casing sections to protect water bearing zones.
- A minimum of 8 hours of wait on cement time will be observed on each hole section to allow adequate time for cement to achieve a minimum of 500 psi of compressive strength. The BOP will not be nipped down, the wellhead will not be installed, the casing will not be tested and the prior casing shoe will not be drilled out until adequate wait on cement time has been observed (8 hours or time to reach 500 psi compressive strength).

5. Drilling Fluids Program

A. Proposed Drilling Fluids Program:

Proposed Drilling Fluids Program					
Interval	Fluid Type	Density (ppg)	Fluid Loss (mL/30 min)	Invert Ratio (%Diesel / %Brine)	Depth (ft. MD)
Surface	Water/Gel	8.3 – 9.2	NC	N/A	0' – 350'
Intermediate	LSND / Gel	8.4 – 10.0	<6	N/A	350' – 6,159'
Pilot	LSND / Gel	9.0 – 11.0	<6	N/A	6,159' – 7,750'
Production	Oil Base Mud	10.0 – 12.0	6 – 8	70/30 – 75/25	6,159' – 19,774'

Notes:

- In the 8-1/2" production section, oil base mud will be utilized which will be an invert mud. The base fluid will be diesel. Brine fluid will be CaCl₂ or KCl.
- 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 for all hole sections will be transported to an approved disposal site.
- Estimated total volume of drill cuttings for disposal: 1,906 bbls (10,696 ft³).

6. Estimated Pressures & Drilling Hazards

A. Estimated Pressures

- Estimated Reservoir Pressure of Mancos Shale target: 4,000 – 4,200 psi
- No over-pressured intervals expected (aside from Mancos Shale target).
- There is production from the Fruitland Coal, Mesa Verde and Pictured Cliffs formations in offset wells in the area, which could result in these formations being depleted.

San Juan County, NM

Allison Unit #611H



B. Water Flows

- Water flows are possible in the intermediate section. Water flows will be mitigated with increased mud weight.

C. Lost Circulation

- Lost circulation is possible in the intermediate section. Losses will be mitigated by utilizing LCM in the mud system.

D. Hydrogen Sulfide

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

7. Pilot Hole

A. Pilot Hole Drilling

- A pilot hole will be drilled through the base of the Mancos Shale from the 9-5/8" intermediate casing shoe at 6,159' MD to a planned TD of 7,750' MD / 7,675' TVD.

B. Pilot Hole Evaluation

- Whole cores and sidewall cores are planned for this section.
- Open hole logging via wireline is planned for this section.

C. Pilot Hole Cementing

- After evaluating the pilot hole, the pilot hole will be isolated utilizing (3) open hole cement plugs.
 - o Cement plug #1: TD of pilot hole – ~7,750'
 - o Cement plug #2: ~7,500' – ~6,900'
 - o Cement plug #3: ~6,900' – ~6,300'
- The third and last open hole cement plug will be dressed off to below the 9-5/8" intermediate casing shoe, where it will be utilized to kick-off and begin drilling the production interval of the well.

8. Testing, Logging, Coring

A. Mud Logging

- Mud loggers will collect formation samples every 30'-90' from surface casing shoe to TD of the well.

B. MWD

- Measurement while drilling tools will be utilized on all sections of the well to measure and record inclination and azimuth.

San Juan County, NM

Allison Unit #611H



C. 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 interval while drilling the lateral section.

D. Open Hole Logging

- Triple combo, dipole sonic and imaging logs are planned for the pilot hole section of the well.

E. Coring

- Whole cores and sidewall cores are planned for the pilot hole section of the well.

F. Cased Hole Logging

- The 9-5/8" intermediate casing will be cemented to surface to protect water bearing zones. If cement is not circulated to surface on the intermediate cement job, a temperature survey or a cement bod log will be run to verify top of cement.

9. 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 as formation and wellbore dictate.

10. Completion

A. Pressure Testing

- A pressure test of the 5-1/2" production casing will be conducted to the maximum allowable frac pressure for 30 minutes.
- Pressure will be cycled to shift the toe sleeve open.

B. Stimulation

- The well will be stimulated with sand and water. The number of stages and amount of proppant used will be adjusted based on actual lateral length and real-time pumping conditions during the stimulation.
- Individual stages will be perforated on wireline and isolated using frac plugs or dissolvable frac plugs.
- Upon completion of the stimulation operation, frac plugs will be drilled out and the stimulation fluid will be flowed back.



San Juan County, NM

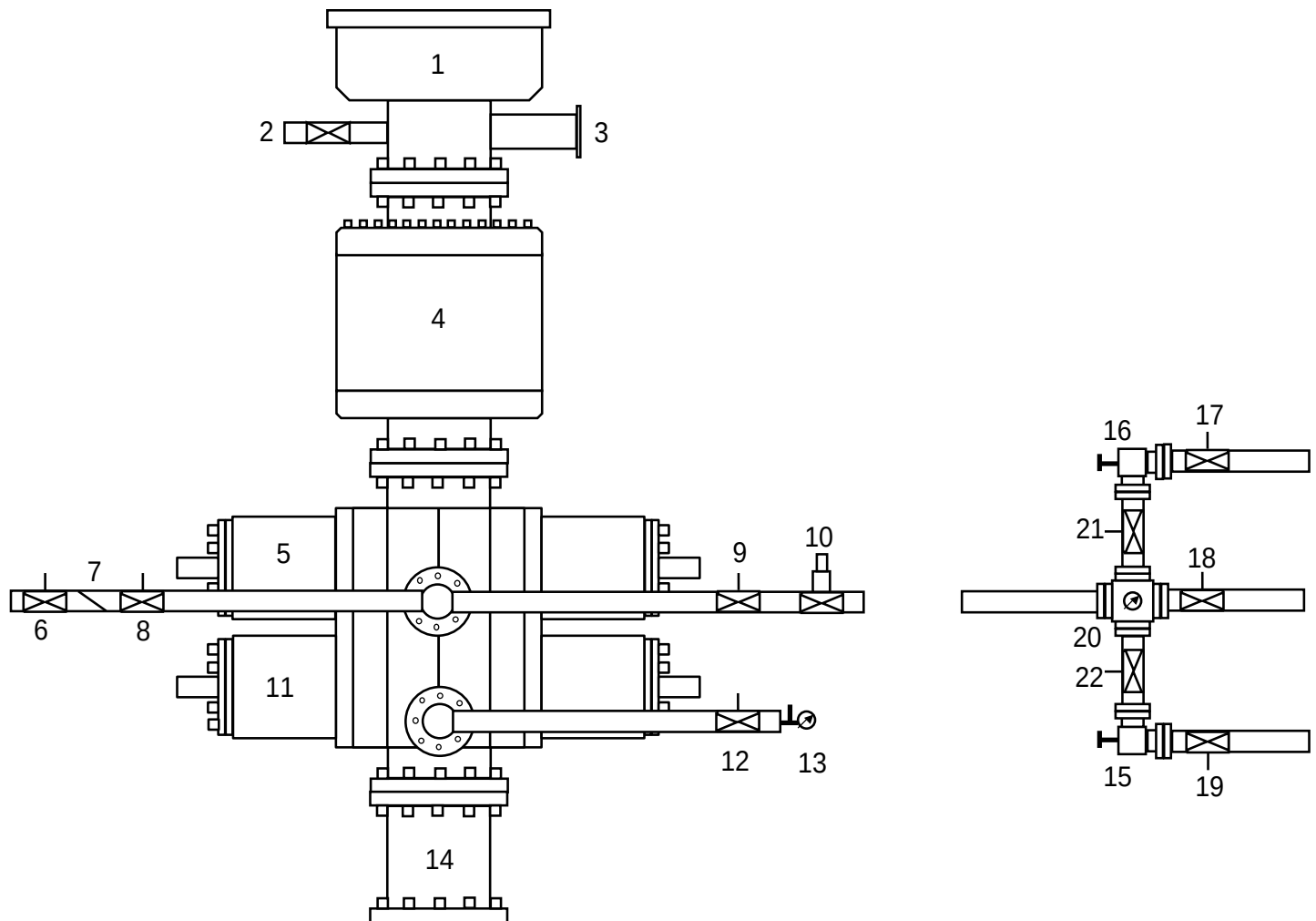
Allison Unit #611H

Hilcorp Energy Company

*NOTE: Although this horizontal well may be drilled past the applicable setbacks, an unorthodox location application is not required because the completed interval in this well, as defined by 19.15.16.7 8(1) NMAC, will be entirely within the applicable setbacks. This approach complies with all applicable rules, including 19.15.16.14 A(3) NMAC, 19.15.16.14 8(2) NMAC, 19.15.16.15 8(2)NMAC, and 19.15.16.15 8(4) NMAC.

Appendix A

13-5/8" 5M BOP & 5M Choke Manifold Configuration



1	Rotating Head	12	Manual Isolation Valve
2	Fill-Up Line	13	Needle Valve & Pressure Gauge
3	Flow Line	14	Spacer Spool (if needed)
4	5M Annular Preventer	15	Manual Choke
5	5M Pipe Rams	16	Hydraulically Operated 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	5M Blind Rams	22	Manual Isolation Valve



Company: Hilcorp Energy Corp.
Project: San Juan, NM NAD27
Site: Allison Unit 611H
Well: Allison Unit 611H
Wellbore: Pilot
Design: Plan #2



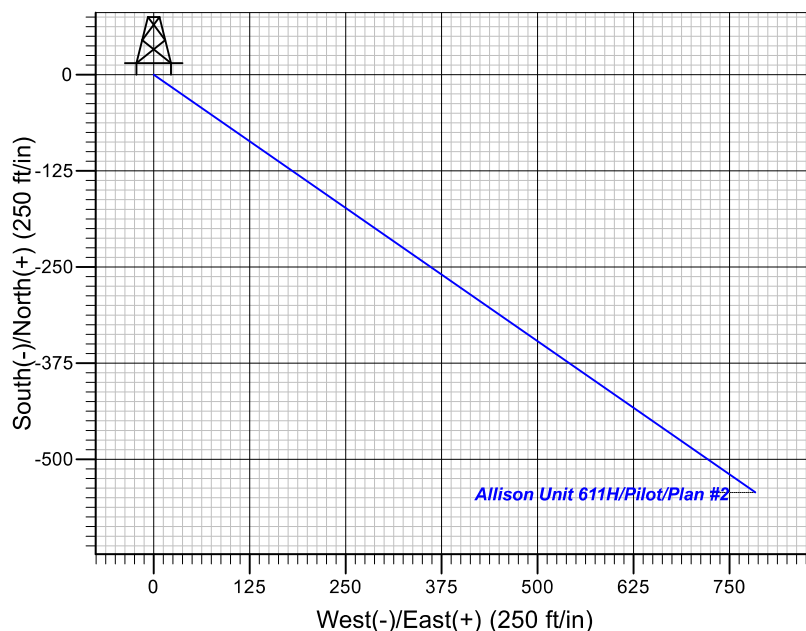
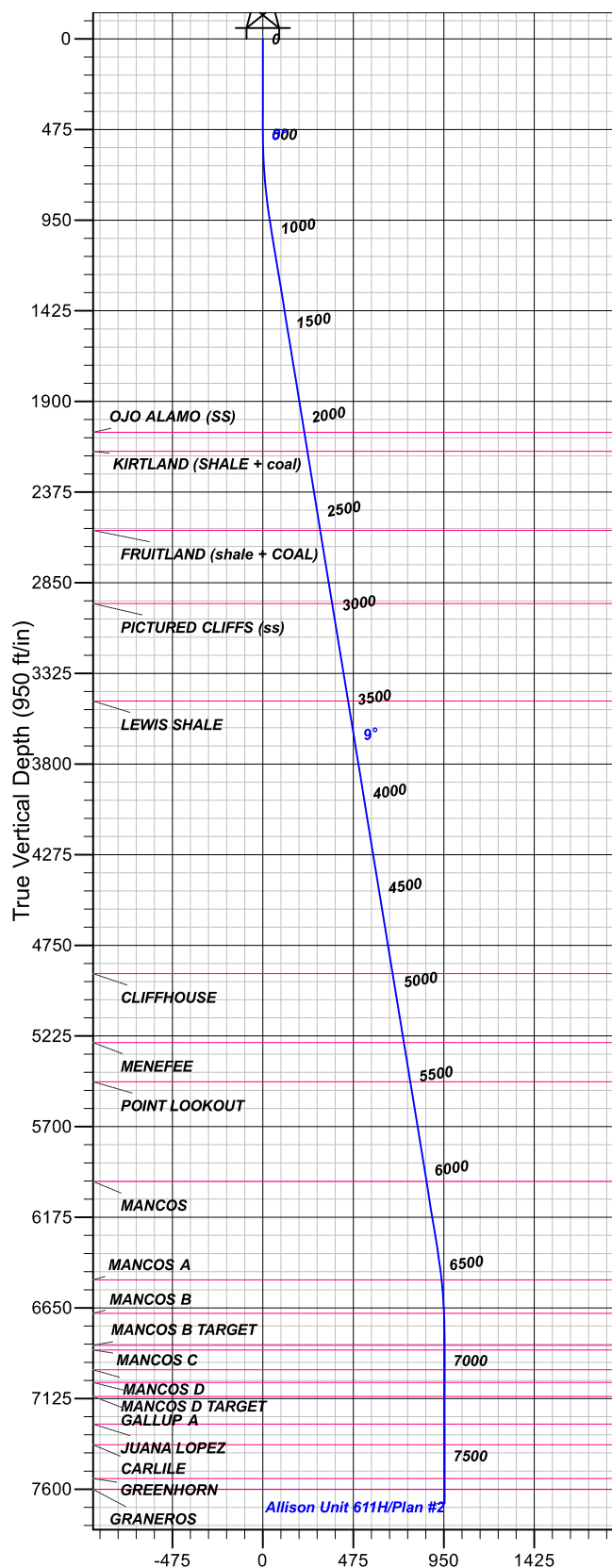
Well Details: Allison Unit 611H

+N/-S	+E/-W	Northing	GL 6354' & RKB 17' @ 6371.00ft	Easting	Latitude	Longitude	Slot
0.00	0.00	2183284.78		591380.70	36.9996290	-107.5204040	



Azimuths to True North
Magnetic North: 8.77°

Magnetic Field
Strength: 49650.4nT
Dip Angle: 63.43°
Date: 12/31/2021
Model: HDGM2021_FILE



FORMATION TOP DETAILS

TVDPPath	MDPath	Formation
2062.00	2078.61	OJO ALAMO (SS)
2162.00	2179.94	KIRTLAND (SHALE + coal)
2576.00	2599.43	FRUITLAND (shale + COAL)
2960.00	2988.52	PICTURED CLIFFS (ss)
3470.00	3505.29	LEWIS SHALE
4899.00	4953.24	CLIFFHOUSE
5260.00	5319.02	MENEFEE
5466.00	5527.76	POINT LOOKOUT
5988.00	6056.68	MANCOS
6503.00	6577.81	MANCOS A
6679.00	6754.31	MANCOS B
6846.00	6921.34	MANCOS B TARGET
6871.00	6946.34	MANCOS C
6974.00	7049.34	MANCOS D
7041.00	7116.34	MANCOS D TARGET
7114.00	7189.34	GALLUP A
7259.00	7334.34	JUANA LOPEZ
7368.00	7443.34	CARLILE
7544.00	7619.34	GREENHORN
7601.00	7676.34	GRANEROS

Plan: Plan #2

13:08, August 08 2023
Created By: Janie Collins

PROJECT DETAILS: San Juan, NM NAD27

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

CASING DETAILS

No casing data is available

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.000	500.00	0.00	0.00	0.00	0.00	0.00
964.00	9.28	124.718	961.97	-21.35	30.82	2.00	124.72	37.49
6411.02	9.28	124.718	6337.70	-521.63	752.82	0.00	0.00	915.88
6875.02	0.00	0.000	6799.68	-542.98	783.64	2.00	180.00	953.37
7750.34	0.00	0.000	7675.00	-542.98	783.64	0.00	0.00	953.37

DESIGN TARGET DETAILS

No target data is available.

Vertical Section at 124.718° (950 ft/in)



Hilcorp Energy Corp.

San Juan, NM NAD27

Allison Unit 611H

Allison Unit 611H

Pilot

Plan: Plan #2

Standard Planning Report

08 August, 2023





Lonestar Consulting, LLC

Planning Report



Database:	Grand Junction	Local Co-ordinate Reference:	Well Allison Unit 611H
Company:	Hilcorp Energy Corp.	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Project:	San Juan, NM NAD27	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site:	Allison Unit 611H	North Reference:	True
Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Pilot		
Design:	Plan #2		

Project	San Juan, NM NAD27		
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	Allison Unit 611H			
Site Position:		Northing:	2,183,284.78 usft	Latitude: 36.9996290
From:	Lat/Long	Easting:	591,380.71 usft	Longitude: -107.5204040
Position Uncertainty:	0.00 ft	Slot Radius:	13.20 in	

Well	Allison Unit 611H			
Well Position	+N/-S	0.00 ft	Northing:	2,183,284.78 usft
	+E/-W	0.00 ft	Easting:	591,380.71 usft
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft
Grid Convergence:		0.19 °	Ground Level:	6,354.00 ft

Wellbore	Pilot				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM2021_FILE	12/31/2021	8.77	63.43	49,650.40000000

Design	Plan #2			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	124.718

Plan Survey Tool Program	Date	8/8/2023		
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	7,749.60 Plan #2 (Pilot)	MWD+HDGM	
			OWSG MWD + HDGM	

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
500.00	0.00	0.000	500.00	0.00	0.00	0.00	0.00	0.00	0.00	
964.00	9.28	124.718	961.97	-21.35	30.82	2.00	2.00	0.00	124.72	
6,411.02	9.28	124.718	6,337.70	-521.63	752.82	0.00	0.00	0.00	0.00	
6,875.02	0.00	0.000	6,799.68	-542.98	783.64	2.00	-2.00	0.00	180.00	
7,750.34	0.00	0.000	7,675.00	-542.98	783.64	0.00	0.00	0.00	0.00	



Lonestar Consulting, LLC

Planning Report



Database:	Grand Junction	Local Co-ordinate Reference:	Well Allison Unit 611H
Company:	Hilcorp Energy Corp.	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Project:	San Juan, NM NAD27	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site:	Allison Unit 611H	North Reference:	True
Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Pilot		
Design:	Plan #2		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.000	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.000	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.000	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.000	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.000	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	2.00	124.718	599.98	-0.99	1.43	1.75	2.00	2.00	0.00
700.00	4.00	124.718	699.84	-3.97	5.74	6.98	2.00	2.00	0.00
800.00	6.00	124.718	799.45	-8.94	12.90	15.69	2.00	2.00	0.00
900.00	8.00	124.718	898.70	-15.88	22.92	27.88	2.00	2.00	0.00
964.00	9.28	124.718	961.97	-21.35	30.82	37.49	2.00	2.00	0.00
1,000.00	9.28	124.718	997.50	-24.66	35.59	43.30	0.00	0.00	0.00
1,100.00	9.28	124.718	1,096.19	-33.84	48.85	59.43	0.00	0.00	0.00
1,200.00	9.28	124.718	1,194.89	-43.03	62.10	75.55	0.00	0.00	0.00
1,300.00	9.28	124.718	1,293.58	-52.21	75.36	91.68	0.00	0.00	0.00
1,400.00	9.28	124.718	1,392.27	-61.40	88.61	107.80	0.00	0.00	0.00
1,500.00	9.28	124.718	1,490.96	-70.58	101.87	123.93	0.00	0.00	0.00
1,600.00	9.28	124.718	1,589.65	-79.77	115.12	140.06	0.00	0.00	0.00
1,700.00	9.28	124.718	1,688.34	-88.95	128.38	156.18	0.00	0.00	0.00
1,800.00	9.28	124.718	1,787.03	-98.14	141.63	172.31	0.00	0.00	0.00
1,900.00	9.28	124.718	1,885.72	-107.32	154.89	188.43	0.00	0.00	0.00
2,000.00	9.28	124.718	1,984.41	-116.50	168.14	204.56	0.00	0.00	0.00
2,100.00	9.28	124.718	2,083.11	-125.69	181.40	220.68	0.00	0.00	0.00
2,200.00	9.28	124.718	2,181.80	-134.87	194.65	236.81	0.00	0.00	0.00
2,300.00	9.28	124.718	2,280.49	-144.06	207.91	252.94	0.00	0.00	0.00
2,400.00	9.28	124.718	2,379.18	-153.24	221.16	269.06	0.00	0.00	0.00
2,500.00	9.28	124.718	2,477.87	-162.43	234.41	285.19	0.00	0.00	0.00
2,600.00	9.28	124.718	2,576.56	-171.61	247.67	301.31	0.00	0.00	0.00
2,700.00	9.28	124.718	2,675.25	-180.79	260.92	317.44	0.00	0.00	0.00
2,800.00	9.28	124.718	2,773.94	-189.98	274.18	333.57	0.00	0.00	0.00
2,900.00	9.28	124.718	2,872.64	-199.16	287.43	349.69	0.00	0.00	0.00
3,000.00	9.28	124.718	2,971.33	-208.35	300.69	365.82	0.00	0.00	0.00
3,100.00	9.28	124.718	3,070.02	-217.53	313.94	381.94	0.00	0.00	0.00
3,200.00	9.28	124.718	3,168.71	-226.72	327.20	398.07	0.00	0.00	0.00
3,300.00	9.28	124.718	3,267.40	-235.90	340.45	414.20	0.00	0.00	0.00
3,400.00	9.28	124.718	3,366.09	-245.08	353.71	430.32	0.00	0.00	0.00
3,500.00	9.28	124.718	3,464.78	-254.27	366.96	446.45	0.00	0.00	0.00
3,600.00	9.28	124.718	3,563.47	-263.45	380.22	462.57	0.00	0.00	0.00
3,700.00	9.28	124.718	3,662.17	-272.64	393.47	478.70	0.00	0.00	0.00
3,800.00	9.28	124.718	3,760.86	-281.82	406.73	494.83	0.00	0.00	0.00
3,900.00	9.28	124.718	3,859.55	-291.01	419.98	510.95	0.00	0.00	0.00
4,000.00	9.28	124.718	3,958.24	-300.19	433.24	527.08	0.00	0.00	0.00
4,100.00	9.28	124.718	4,056.93	-309.37	446.49	543.20	0.00	0.00	0.00
4,200.00	9.28	124.718	4,155.62	-318.56	459.75	559.33	0.00	0.00	0.00
4,300.00	9.28	124.718	4,254.31	-327.74	473.00	575.46	0.00	0.00	0.00
4,400.00	9.28	124.718	4,353.00	-336.93	486.26	591.58	0.00	0.00	0.00
4,500.00	9.28	124.718	4,451.70	-346.11	499.51	607.71	0.00	0.00	0.00
4,600.00	9.28	124.718	4,550.39	-355.30	512.77	623.83	0.00	0.00	0.00
4,700.00	9.28	124.718	4,649.08	-364.48	526.02	639.96	0.00	0.00	0.00
4,800.00	9.28	124.718	4,747.77	-373.67	539.28	656.08	0.00	0.00	0.00
4,900.00	9.28	124.718	4,846.46	-382.85	552.53	672.21	0.00	0.00	0.00
5,000.00	9.28	124.718	4,945.15	-392.03	565.79	688.34	0.00	0.00	0.00
5,100.00	9.28	124.718	5,043.84	-401.22	579.04	704.46	0.00	0.00	0.00
5,200.00	9.28	124.718	5,142.53	-410.40	592.30	720.59	0.00	0.00	0.00



Lonestar Consulting, LLC

Planning Report



Database:	Grand Junction	Local Co-ordinate Reference:	Well Allison Unit 611H
Company:	Hilcorp Energy Corp.	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Project:	San Juan, NM NAD27	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site:	Allison Unit 611H	North Reference:	True
Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Pilot		
Design:	Plan #2		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,300.00	9.28	124.718	5,241.22	-419.59	605.55	736.71	0.00	0.00	0.00
5,400.00	9.28	124.718	5,339.92	-428.77	618.81	752.84	0.00	0.00	0.00
5,500.00	9.28	124.718	5,438.61	-437.96	632.06	768.97	0.00	0.00	0.00
5,600.00	9.28	124.718	5,537.30	-447.14	645.32	785.09	0.00	0.00	0.00
5,700.00	9.28	124.718	5,635.99	-456.32	658.57	801.22	0.00	0.00	0.00
5,800.00	9.28	124.718	5,734.68	-465.51	671.83	817.34	0.00	0.00	0.00
5,900.00	9.28	124.718	5,833.37	-474.69	685.08	833.47	0.00	0.00	0.00
6,000.00	9.28	124.718	5,932.06	-483.88	698.34	849.60	0.00	0.00	0.00
6,100.00	9.28	124.718	6,030.75	-493.06	711.59	865.72	0.00	0.00	0.00
6,200.00	9.28	124.718	6,129.45	-502.25	724.85	881.85	0.00	0.00	0.00
6,300.00	9.28	124.718	6,228.14	-511.43	738.10	897.97	0.00	0.00	0.00
6,400.00	9.28	124.718	6,326.83	-520.61	751.36	914.10	0.00	0.00	0.00
6,411.02	9.28	124.718	6,337.70	-521.63	752.82	915.88	0.00	0.00	0.00
6,500.00	7.50	124.718	6,425.73	-529.02	763.49	928.86	2.00	-2.00	0.00
6,600.00	5.50	124.718	6,525.08	-535.47	772.80	940.18	2.00	-2.00	0.00
6,700.00	3.50	124.718	6,624.77	-539.94	779.24	948.03	2.00	-2.00	0.00
6,800.00	1.50	124.718	6,724.67	-542.42	782.83	952.39	2.00	-2.00	0.00
6,875.02	0.00	0.000	6,799.68	-542.98	783.64	953.37	2.00	-2.00	0.00
6,900.00	0.00	0.000	6,824.66	-542.98	783.64	953.37	0.00	0.00	0.00
7,000.00	0.00	0.000	6,924.66	-542.98	783.64	953.37	0.00	0.00	0.00
7,100.00	0.00	0.000	7,024.66	-542.98	783.64	953.37	0.00	0.00	0.00
7,200.00	0.00	0.000	7,124.66	-542.98	783.64	953.37	0.00	0.00	0.00
7,300.00	0.00	0.000	7,224.66	-542.98	783.64	953.37	0.00	0.00	0.00
7,400.00	0.00	0.000	7,324.66	-542.98	783.64	953.37	0.00	0.00	0.00
7,500.00	0.00	0.000	7,424.66	-542.98	783.64	953.37	0.00	0.00	0.00
7,600.00	0.00	0.000	7,524.66	-542.98	783.64	953.37	0.00	0.00	0.00
7,700.00	0.00	0.000	7,624.66	-542.98	783.64	953.37	0.00	0.00	0.00
7,750.34	0.00	0.000	7,675.00	-542.98	783.64	953.37	0.00	0.00	0.00



Lonestar Consulting, LLC Planning Report



Database:	Grand Junction	Local Co-ordinate Reference:	Well Allison Unit 611H
Company:	Hilcorp Energy Corp.	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Project:	San Juan, NM NAD27	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site:	Allison Unit 611H	North Reference:	True
Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Pilot		
Design:	Plan #2		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
2,078.61	2,062.00	OJO ALAMO (SS)		0.00	0.000	
2,179.94	2,162.00	KIRTLAND (SHALE + coal)		0.00	0.000	
2,599.43	2,576.00	FRUITLAND (shale + COAL)		0.00	0.000	
2,988.52	2,960.00	PICTURED CLIFFS (ss)		0.00	0.000	
3,505.29	3,470.00	LEWIS SHALE		0.00	0.000	
4,953.24	4,899.00	CLIFFHOUSE		0.00	0.000	
5,319.02	5,260.00	MENEFEE		0.00	0.000	
5,527.76	5,466.00	POINT LOOKOUT		0.00	0.000	
6,056.68	5,988.00	MANCOS		0.00	0.000	
6,577.81	6,503.00	MANCOS A		0.00	0.000	
6,754.31	6,679.00	MANCOS B		0.00	0.000	
6,921.34	6,846.00	MANCOS B TARGET		0.00	0.000	
6,946.34	6,871.00	MANCOS C		0.00	0.000	
7,049.34	6,974.00	MANCOS D		0.00	0.000	
7,116.34	7,041.00	MANCOS D TARGET		0.00	0.000	
7,189.34	7,114.00	GALLUP A		0.00	0.000	
7,334.34	7,259.00	JUANA LOPEZ		0.00	0.000	
7,443.34	7,368.00	CARLILE		0.00	0.000	
7,619.34	7,544.00	GREENHORN		0.00	0.000	
7,676.34	7,601.00	GRANEROS		0.00	0.000	

Released to Imaging: 9/21/2023 9:09:10 AM



Company: Hilcorp Energy Corp.
Project: San Juan, NM NAD27
Site: Allison Unit 611H
Well: Allison Unit 611H
Wellbore: Lateral
Design: Plan #2

PROJECT DETAILS: San Juan, NM NAD27

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
Local North: True



WELL DETAILS: Allison Unit 611H

GL 6354' & RKB 17' @ 6371.00ft

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	2183284.78	591380.70	36.9996290	-107.5204040

Plan: Plan #2 (Allison Unit 611H/Lateral)

Created By: Janie Collins Date: 13:22, August 08 2023

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
AU 611H LP	6848.00	-567.91	1378.42	2182721.41	592760.98	36.9980690	-107.5156838
611H BHL	6851.00	-542.11	13766.14	2182787.93	605148.53	36.9981306	-107.4732639

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.000	500.00	0.00	0.00	0.00	0.00	0.00
963.97	9.28	124.718	961.95	-21.35	30.82	2.00	124.72	31.63
6370.81	9.28	124.718	6298.03	-517.90	747.45	0.00	0.00	767.10
7286.15	89.99	89.881	6848.00	-567.91	1378.42	9.00	-35.19	1399.55
19673.90	89.99	89.881	6851.00	-542.11	13766.14	0.00	0.00	13776.81
19773.90	89.99	89.881	6851.02	-541.90	13866.14	0.00	0.00	13876.73



Azimuths to True North
Magnetic North: 8

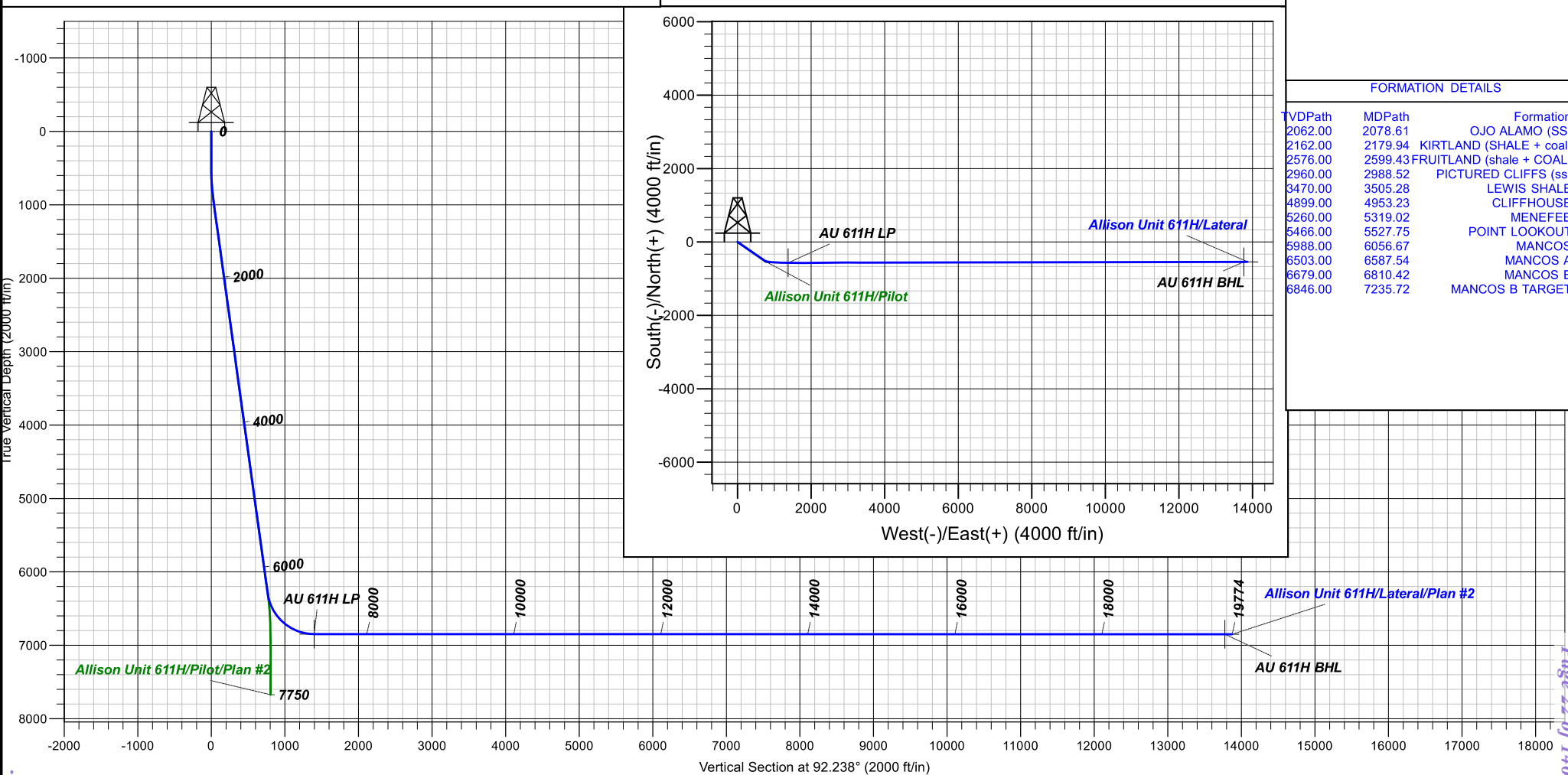
Magnetic Field
Strength: 49650
Dip Angle: 63.4°
Date: 12/31/2021
Model: HDGM2021_F

CASING DETAILS

No casing data is available

FORMATION DETAILS

TVDPath	MDPath	Formation
2062.00	2078.61	OJO ALAMO (SS)
2162.00	2179.94	KIRTLAND (SHALE + coal)
2576.00	2599.43	FRUITLAND (shale + COAL)
2960.00	2988.52	PICTURED CLIFFS (ss)
3470.00	3505.28	LEWIS SHALE
4899.00	4953.23	CLIFFHOUSE
5260.00	5319.02	MENEFFEE
5466.00	5527.75	POINT LOOKOUT
5988.00	6056.67	MANCOS
6503.00	6587.54	MANCOS A
6679.00	6810.42	MANCOS B
6846.00	7235.72	MANCOS B TARGET



Received by OCB: 9/21/2023 9:32:31 AM



Hilcorp Energy Corp.

San Juan, NM NAD27

Allison Unit 611H

Allison Unit 611H

Lateral

Plan: Plan #2

Standard Planning Report

08 August, 2023





Lonestar Consulting, LLC

Planning Report



Database:	Grand Junction	Local Co-ordinate Reference:	Well Allison Unit 611H
Company:	Hilcorp Energy Corp.	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Project:	San Juan, NM NAD27	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site:	Allison Unit 611H	North Reference:	True
Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral		
Design:	Plan #2		

Project	San Juan, NM NAD27		
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	Allison Unit 611H			
Site Position:		Northing:	2,183,284.78 usft	Latitude: 36.9996290
From:	Lat/Long	Easting:	591,380.71 usft	Longitude: -107.5204040
Position Uncertainty:	0.00 ft	Slot Radius:	13.20 in	

Well	Allison Unit 611H			
Well Position	+N/-S	0.00 ft	Northing:	2,183,284.78 usft
	+E/-W	0.00 ft	Easting:	591,380.71 usft
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft
Grid Convergence:		0.19 °	Ground Level:	6,354.00 ft

Wellbore	Lateral				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM2021_FILE	12/31/2021	8.77	63.43	49,650.40000000

Design	Plan #2			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	92.238

Plan Survey Tool Program	Date	8/8/2023		
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	19,773.90 Plan #2 (Lateral)	MWD+HDGM	
			OWSG MWD + HDGM	

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
500.00	0.00	0.000	500.00	0.00	0.00	0.00	0.00	0.00	0.00	
963.97	9.28	124.718	961.95	-21.35	30.82	2.00	2.00	0.00	124.72	
6,370.81	9.28	124.718	6,298.03	-517.90	747.45	0.00	0.00	0.00	0.00	
7,286.15	89.99	89.881	6,848.00	-567.91	1,378.42	9.00	8.82	-3.81	-35.19	AU 611H LP
19,673.90	89.99	89.881	6,851.00	-542.11	13,766.14	0.00	0.00	0.00	0.00	AU 611H BHL
19,773.90	89.99	89.881	6,851.02	-541.90	13,866.14	0.00	0.00	0.00	0.00	



Lonestar Consulting, LLC

Planning Report



Database:	Grand Junction	Local Co-ordinate Reference:	Well Allison Unit 611H
Company:	Hilcorp Energy Corp.	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Project:	San Juan, NM NAD27	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site:	Allison Unit 611H	North Reference:	True
Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral		
Design:	Plan #2		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.000	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.000	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.000	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.000	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.000	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	2.00	124.718	599.98	-0.99	1.43	1.47	2.00	2.00	0.00
700.00	4.00	124.718	699.84	-3.97	5.74	5.89	2.00	2.00	0.00
800.00	6.00	124.718	799.45	-8.94	12.90	13.24	2.00	2.00	0.00
900.00	8.00	124.718	898.70	-15.88	22.92	23.52	2.00	2.00	0.00
963.97	9.28	124.718	961.95	-21.35	30.82	31.63	2.00	2.00	0.00
1,000.00	9.28	124.718	997.50	-24.66	35.59	36.53	0.00	0.00	0.00
1,100.00	9.28	124.718	1,096.19	-33.84	48.84	50.13	0.00	0.00	0.00
1,200.00	9.28	124.718	1,194.89	-43.03	62.10	63.73	0.00	0.00	0.00
1,300.00	9.28	124.718	1,293.58	-52.21	75.35	77.33	0.00	0.00	0.00
1,400.00	9.28	124.718	1,392.27	-61.40	88.61	90.94	0.00	0.00	0.00
1,500.00	9.28	124.718	1,490.96	-70.58	101.86	104.54	0.00	0.00	0.00
1,600.00	9.28	124.718	1,589.65	-79.76	115.12	118.14	0.00	0.00	0.00
1,700.00	9.28	124.718	1,688.34	-88.95	128.37	131.75	0.00	0.00	0.00
1,800.00	9.28	124.718	1,787.03	-98.13	141.62	145.35	0.00	0.00	0.00
1,900.00	9.28	124.718	1,885.73	-107.31	154.88	158.95	0.00	0.00	0.00
2,000.00	9.28	124.718	1,984.42	-116.50	168.13	172.55	0.00	0.00	0.00
2,100.00	9.28	124.718	2,083.11	-125.68	181.39	186.16	0.00	0.00	0.00
2,200.00	9.28	124.718	2,181.80	-134.87	194.64	199.76	0.00	0.00	0.00
2,300.00	9.28	124.718	2,280.49	-144.05	207.90	213.36	0.00	0.00	0.00
2,400.00	9.28	124.718	2,379.18	-153.23	221.15	226.96	0.00	0.00	0.00
2,500.00	9.28	124.718	2,477.87	-162.42	234.40	240.57	0.00	0.00	0.00
2,600.00	9.28	124.718	2,576.56	-171.60	247.66	254.17	0.00	0.00	0.00
2,700.00	9.28	124.718	2,675.26	-180.78	260.91	267.77	0.00	0.00	0.00
2,800.00	9.28	124.718	2,773.95	-189.97	274.17	281.38	0.00	0.00	0.00
2,900.00	9.28	124.718	2,872.64	-199.15	287.42	294.98	0.00	0.00	0.00
3,000.00	9.28	124.718	2,971.33	-208.34	300.67	308.58	0.00	0.00	0.00
3,100.00	9.28	124.718	3,070.02	-217.52	313.93	322.18	0.00	0.00	0.00
3,200.00	9.28	124.718	3,168.71	-226.70	327.18	335.79	0.00	0.00	0.00
3,300.00	9.28	124.718	3,267.40	-235.89	340.44	349.39	0.00	0.00	0.00
3,400.00	9.28	124.718	3,366.10	-245.07	353.69	362.99	0.00	0.00	0.00
3,500.00	9.28	124.718	3,464.79	-254.25	366.95	376.59	0.00	0.00	0.00
3,600.00	9.28	124.718	3,563.48	-263.44	380.20	390.20	0.00	0.00	0.00
3,700.00	9.28	124.718	3,662.17	-272.62	393.45	403.80	0.00	0.00	0.00
3,800.00	9.28	124.718	3,760.86	-281.81	406.71	417.40	0.00	0.00	0.00
3,900.00	9.28	124.718	3,859.55	-290.99	419.96	431.01	0.00	0.00	0.00
4,000.00	9.28	124.718	3,958.24	-300.17	433.22	444.61	0.00	0.00	0.00
4,100.00	9.28	124.718	4,056.94	-309.36	446.47	458.21	0.00	0.00	0.00
4,200.00	9.28	124.718	4,155.63	-318.54	459.73	471.81	0.00	0.00	0.00
4,300.00	9.28	124.718	4,254.32	-327.72	472.98	485.42	0.00	0.00	0.00
4,400.00	9.28	124.718	4,353.01	-336.91	486.23	499.02	0.00	0.00	0.00
4,500.00	9.28	124.718	4,451.70	-346.09	499.49	512.62	0.00	0.00	0.00
4,600.00	9.28	124.718	4,550.39	-355.28	512.74	526.22	0.00	0.00	0.00
4,700.00	9.28	124.718	4,649.08	-364.46	526.00	539.83	0.00	0.00	0.00
4,800.00	9.28	124.718	4,747.77	-373.64	539.25	553.43	0.00	0.00	0.00
4,900.00	9.28	124.718	4,846.47	-382.83	552.50	567.03	0.00	0.00	0.00
5,000.00	9.28	124.718	4,945.16	-392.01	565.76	580.64	0.00	0.00	0.00
5,100.00	9.28	124.718	5,043.85	-401.19	579.01	594.24	0.00	0.00	0.00
5,200.00	9.28	124.718	5,142.54	-410.38	592.27	607.84	0.00	0.00	0.00



Lonestar Consulting, LLC

Planning Report



Database:	Grand Junction	Local Co-ordinate Reference:	Well Allison Unit 611H
Company:	Hilcorp Energy Corp.	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Project:	San Juan, NM NAD27	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site:	Allison Unit 611H	North Reference:	True
Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral		
Design:	Plan #2		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,300.00	9.28	124.718	5,241.23	-419.56	605.52	621.44	0.00	0.00	0.00
5,400.00	9.28	124.718	5,339.92	-428.75	618.78	635.05	0.00	0.00	0.00
5,500.00	9.28	124.718	5,438.61	-437.93	632.03	648.65	0.00	0.00	0.00
5,600.00	9.28	124.718	5,537.31	-447.11	645.28	662.25	0.00	0.00	0.00
5,700.00	9.28	124.718	5,636.00	-456.30	658.54	675.85	0.00	0.00	0.00
5,800.00	9.28	124.718	5,734.69	-465.48	671.79	689.46	0.00	0.00	0.00
5,900.00	9.28	124.718	5,833.38	-474.66	685.05	703.06	0.00	0.00	0.00
6,000.00	9.28	124.718	5,932.07	-483.85	698.30	716.66	0.00	0.00	0.00
6,100.00	9.28	124.718	6,030.76	-493.03	711.56	730.27	0.00	0.00	0.00
6,200.00	9.28	124.718	6,129.45	-502.22	724.81	743.87	0.00	0.00	0.00
6,300.00	9.28	124.718	6,228.15	-511.40	738.06	757.47	0.00	0.00	0.00
6,370.81	9.28	124.718	6,298.03	-517.90	747.45	767.10	0.00	0.00	0.00
6,400.00	11.53	117.120	6,326.74	-520.57	751.98	771.74	9.00	7.69	-26.03
6,500.00	19.93	104.795	6,422.93	-529.50	777.40	797.49	9.00	8.41	-12.32
6,600.00	28.69	99.699	6,513.99	-537.91	817.63	838.01	9.00	8.76	-5.10
6,700.00	37.56	96.851	6,597.66	-545.61	871.66	892.30	9.00	8.87	-2.85
6,800.00	46.47	94.966	6,671.88	-552.40	938.17	959.03	9.00	8.91	-1.89
6,900.00	55.40	93.570	6,734.84	-558.11	1,015.52	1,036.54	9.00	8.93	-1.40
7,000.00	64.35	92.448	6,784.97	-562.61	1,101.81	1,122.94	9.00	8.95	-1.12
7,100.00	73.31	91.483	6,821.05	-565.78	1,194.91	1,216.10	9.00	8.96	-0.96
7,200.00	82.27	90.606	6,842.18	-567.54	1,292.53	1,313.71	9.00	8.96	-0.88
7,286.15	89.99	89.881	6,848.00	-567.91	1,378.42	1,399.55	9.00	8.96	-0.84
7,300.00	89.99	89.881	6,848.00	-567.88	1,392.27	1,413.39	0.00	0.00	0.00
7,400.00	89.99	89.881	6,848.03	-567.67	1,492.27	1,513.30	0.00	0.00	0.00
7,500.00	89.99	89.881	6,848.05	-567.46	1,592.27	1,613.22	0.00	0.00	0.00
7,600.00	89.99	89.881	6,848.08	-567.25	1,692.27	1,713.13	0.00	0.00	0.00
7,700.00	89.99	89.881	6,848.10	-567.04	1,792.27	1,813.05	0.00	0.00	0.00
7,800.00	89.99	89.881	6,848.12	-566.84	1,892.27	1,912.96	0.00	0.00	0.00
7,900.00	89.99	89.881	6,848.15	-566.63	1,992.27	2,012.88	0.00	0.00	0.00
8,000.00	89.99	89.881	6,848.17	-566.42	2,092.27	2,112.79	0.00	0.00	0.00
8,100.00	89.99	89.881	6,848.20	-566.21	2,192.27	2,212.71	0.00	0.00	0.00
8,200.00	89.99	89.881	6,848.22	-566.00	2,292.27	2,312.62	0.00	0.00	0.00
8,300.00	89.99	89.881	6,848.25	-565.79	2,392.27	2,412.54	0.00	0.00	0.00
8,400.00	89.99	89.881	6,848.27	-565.59	2,492.27	2,512.45	0.00	0.00	0.00
8,500.00	89.99	89.881	6,848.29	-565.38	2,592.27	2,612.37	0.00	0.00	0.00
8,600.00	89.99	89.881	6,848.32	-565.17	2,692.27	2,712.28	0.00	0.00	0.00
8,700.00	89.99	89.881	6,848.34	-564.96	2,792.27	2,812.20	0.00	0.00	0.00
8,800.00	89.99	89.881	6,848.37	-564.75	2,892.27	2,912.12	0.00	0.00	0.00
8,900.00	89.99	89.881	6,848.39	-564.54	2,992.27	3,012.03	0.00	0.00	0.00
9,000.00	89.99	89.881	6,848.42	-564.33	3,092.27	3,111.95	0.00	0.00	0.00
9,100.00	89.99	89.881	6,848.44	-564.13	3,192.27	3,211.86	0.00	0.00	0.00
9,200.00	89.99	89.881	6,848.46	-563.92	3,292.27	3,311.78	0.00	0.00	0.00
9,300.00	89.99	89.881	6,848.49	-563.71	3,392.27	3,411.69	0.00	0.00	0.00
9,400.00	89.99	89.881	6,848.51	-563.50	3,492.27	3,511.61	0.00	0.00	0.00
9,500.00	89.99	89.881	6,848.54	-563.29	3,592.27	3,611.52	0.00	0.00	0.00
9,600.00	89.99	89.881	6,848.56	-563.08	3,692.27	3,711.44	0.00	0.00	0.00
9,700.00	89.99	89.881	6,848.58	-562.88	3,792.27	3,811.35	0.00	0.00	0.00
9,800.00	89.99	89.881	6,848.61	-562.67	3,892.27	3,911.27	0.00	0.00	0.00
9,900.00	89.99	89.881	6,848.63	-562.46	3,992.27	4,011.18	0.00	0.00	0.00
10,000.00	89.99	89.881	6,848.66	-562.25	4,092.26	4,111.10	0.00	0.00	0.00
10,100.00	89.99	89.881	6,848.68	-562.04	4,192.26	4,211.02	0.00	0.00	0.00
10,200.00	89.99	89.881	6,848.71	-561.83	4,292.26	4,310.93	0.00	0.00	0.00
10,300.00	89.99	89.881	6,848.73	-561.63	4,392.26	4,410.85	0.00	0.00	0.00
10,400.00	89.99	89.881	6,848.75	-561.42	4,492.26	4,510.76	0.00	0.00	0.00



Lonestar Consulting, LLC

Planning Report



Database:	Grand Junction	Local Co-ordinate Reference:	Well Allison Unit 611H
Company:	Hilcorp Energy Corp.	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Project:	San Juan, NM NAD27	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site:	Allison Unit 611H	North Reference:	True
Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral		
Design:	Plan #2		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10,500.00	89.99	89.881	6,848.78	-561.21	4,592.26	4,610.68	0.00	0.00	0.00
10,600.00	89.99	89.881	6,848.80	-561.00	4,692.26	4,710.59	0.00	0.00	0.00
10,700.00	89.99	89.881	6,848.83	-560.79	4,792.26	4,810.51	0.00	0.00	0.00
10,800.00	89.99	89.881	6,848.85	-560.58	4,892.26	4,910.42	0.00	0.00	0.00
10,900.00	89.99	89.881	6,848.88	-560.37	4,992.26	5,010.34	0.00	0.00	0.00
11,000.00	89.99	89.881	6,848.90	-560.17	5,092.26	5,110.25	0.00	0.00	0.00
11,100.00	89.99	89.881	6,848.92	-559.96	5,192.26	5,210.17	0.00	0.00	0.00
11,200.00	89.99	89.881	6,848.95	-559.75	5,292.26	5,310.08	0.00	0.00	0.00
11,300.00	89.99	89.881	6,848.97	-559.54	5,392.26	5,410.00	0.00	0.00	0.00
11,400.00	89.99	89.881	6,849.00	-559.33	5,492.26	5,509.92	0.00	0.00	0.00
11,500.00	89.99	89.881	6,849.02	-559.12	5,592.26	5,609.83	0.00	0.00	0.00
11,600.00	89.99	89.881	6,849.04	-558.92	5,692.26	5,709.75	0.00	0.00	0.00
11,700.00	89.99	89.881	6,849.07	-558.71	5,792.26	5,809.66	0.00	0.00	0.00
11,800.00	89.99	89.881	6,849.09	-558.50	5,892.26	5,909.58	0.00	0.00	0.00
11,900.00	89.99	89.881	6,849.12	-558.29	5,992.26	6,009.49	0.00	0.00	0.00
12,000.00	89.99	89.881	6,849.14	-558.08	6,092.26	6,109.41	0.00	0.00	0.00
12,100.00	89.99	89.881	6,849.17	-557.87	6,192.26	6,209.32	0.00	0.00	0.00
12,200.00	89.99	89.881	6,849.19	-557.67	6,292.26	6,309.24	0.00	0.00	0.00
12,300.00	89.99	89.881	6,849.21	-557.46	6,392.26	6,409.15	0.00	0.00	0.00
12,400.00	89.99	89.881	6,849.24	-557.25	6,492.26	6,509.07	0.00	0.00	0.00
12,500.00	89.99	89.881	6,849.26	-557.04	6,592.26	6,608.98	0.00	0.00	0.00
12,600.00	89.99	89.881	6,849.29	-556.83	6,692.26	6,708.90	0.00	0.00	0.00
12,700.00	89.99	89.881	6,849.31	-556.62	6,792.26	6,808.81	0.00	0.00	0.00
12,800.00	89.99	89.881	6,849.34	-556.41	6,892.26	6,908.73	0.00	0.00	0.00
12,900.00	89.99	89.881	6,849.36	-556.21	6,992.26	7,008.65	0.00	0.00	0.00
13,000.00	89.99	89.881	6,849.38	-556.00	7,092.26	7,108.56	0.00	0.00	0.00
13,100.00	89.99	89.881	6,849.41	-555.79	7,192.26	7,208.48	0.00	0.00	0.00
13,200.00	89.99	89.881	6,849.43	-555.58	7,292.26	7,308.39	0.00	0.00	0.00
13,300.00	89.99	89.881	6,849.46	-555.37	7,392.26	7,408.31	0.00	0.00	0.00
13,400.00	89.99	89.881	6,849.48	-555.16	7,492.26	7,508.22	0.00	0.00	0.00
13,500.00	89.99	89.881	6,849.50	-554.96	7,592.26	7,608.14	0.00	0.00	0.00
13,600.00	89.99	89.881	6,849.53	-554.75	7,692.26	7,708.05	0.00	0.00	0.00
13,700.00	89.99	89.881	6,849.55	-554.54	7,792.26	7,807.97	0.00	0.00	0.00
13,800.00	89.99	89.881	6,849.58	-554.33	7,892.26	7,907.88	0.00	0.00	0.00
13,900.00	89.99	89.881	6,849.60	-554.12	7,992.26	8,007.80	0.00	0.00	0.00
14,000.00	89.99	89.881	6,849.63	-553.91	8,092.26	8,107.71	0.00	0.00	0.00
14,100.00	89.99	89.881	6,849.65	-553.71	8,192.26	8,207.63	0.00	0.00	0.00
14,200.00	89.99	89.881	6,849.67	-553.50	8,292.26	8,307.55	0.00	0.00	0.00
14,300.00	89.99	89.881	6,849.70	-553.29	8,392.26	8,407.46	0.00	0.00	0.00
14,400.00	89.99	89.881	6,849.72	-553.08	8,492.26	8,507.38	0.00	0.00	0.00
14,500.00	89.99	89.881	6,849.75	-552.87	8,592.26	8,607.29	0.00	0.00	0.00
14,600.00	89.99	89.881	6,849.77	-552.66	8,692.25	8,707.21	0.00	0.00	0.00
14,700.00	89.99	89.881	6,849.80	-552.45	8,792.25	8,807.12	0.00	0.00	0.00
14,800.00	89.99	89.881	6,849.82	-552.25	8,892.25	8,907.04	0.00	0.00	0.00
14,900.00	89.99	89.881	6,849.84	-552.04	8,992.25	9,006.95	0.00	0.00	0.00
15,000.00	89.99	89.881	6,849.87	-551.83	9,092.25	9,106.87	0.00	0.00	0.00
15,100.00	89.99	89.881	6,849.89	-551.62	9,192.25	9,206.78	0.00	0.00	0.00
15,200.00	89.99	89.881	6,849.92	-551.41	9,292.25	9,306.70	0.00	0.00	0.00
15,300.00	89.99	89.881	6,849.94	-551.20	9,392.25	9,406.61	0.00	0.00	0.00
15,400.00	89.99	89.881	6,849.97	-551.00	9,492.25	9,506.53	0.00	0.00	0.00
15,500.00	89.99	89.881	6,849.99	-550.79	9,592.25	9,606.44	0.00	0.00	0.00
15,600.00	89.99	89.881	6,850.01	-550.58	9,692.25	9,706.36	0.00	0.00	0.00
15,700.00	89.99	89.881	6,850.04	-550.37	9,792.25	9,806.28	0.00	0.00	0.00
15,800.00	89.99	89.881	6,850.06	-550.16	9,892.25	9,906.19	0.00	0.00	0.00



Lonestar Consulting, LLC

Planning Report



Database:	Grand Junction	Local Co-ordinate Reference:	Well Allison Unit 611H
Company:	Hilcorp Energy Corp.	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Project:	San Juan, NM NAD27	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site:	Allison Unit 611H	North Reference:	True
Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral		
Design:	Plan #2		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
15,900.00	89.99	89.881	6,850.09	-549.95	9,992.25	10,006.11	0.00	0.00	0.00
16,000.00	89.99	89.881	6,850.11	-549.75	10,092.25	10,106.02	0.00	0.00	0.00
16,100.00	89.99	89.881	6,850.13	-549.54	10,192.25	10,205.94	0.00	0.00	0.00
16,200.00	89.99	89.881	6,850.16	-549.33	10,292.25	10,305.85	0.00	0.00	0.00
16,300.00	89.99	89.881	6,850.18	-549.12	10,392.25	10,405.77	0.00	0.00	0.00
16,400.00	89.99	89.881	6,850.21	-548.91	10,492.25	10,505.68	0.00	0.00	0.00
16,500.00	89.99	89.881	6,850.23	-548.70	10,592.25	10,605.60	0.00	0.00	0.00
16,600.00	89.99	89.881	6,850.26	-548.49	10,692.25	10,705.51	0.00	0.00	0.00
16,700.00	89.99	89.881	6,850.28	-548.29	10,792.25	10,805.43	0.00	0.00	0.00
16,800.00	89.99	89.881	6,850.30	-548.08	10,892.25	10,905.34	0.00	0.00	0.00
16,900.00	89.99	89.881	6,850.33	-547.87	10,992.25	11,005.26	0.00	0.00	0.00
17,000.00	89.99	89.881	6,850.35	-547.66	11,092.25	11,105.18	0.00	0.00	0.00
17,100.00	89.99	89.881	6,850.38	-547.45	11,192.25	11,205.09	0.00	0.00	0.00
17,200.00	89.99	89.881	6,850.40	-547.24	11,292.25	11,305.01	0.00	0.00	0.00
17,300.00	89.99	89.881	6,850.43	-547.04	11,392.25	11,404.92	0.00	0.00	0.00
17,400.00	89.99	89.881	6,850.45	-546.83	11,492.25	11,504.84	0.00	0.00	0.00
17,500.00	89.99	89.881	6,850.47	-546.62	11,592.25	11,604.75	0.00	0.00	0.00
17,600.00	89.99	89.881	6,850.50	-546.41	11,692.25	11,704.67	0.00	0.00	0.00
17,700.00	89.99	89.881	6,850.52	-546.20	11,792.25	11,804.58	0.00	0.00	0.00
17,800.00	89.99	89.881	6,850.55	-545.99	11,892.25	11,904.50	0.00	0.00	0.00
17,900.00	89.99	89.881	6,850.57	-545.79	11,992.25	12,004.41	0.00	0.00	0.00
18,000.00	89.99	89.881	6,850.59	-545.58	12,092.25	12,104.33	0.00	0.00	0.00
18,100.00	89.99	89.881	6,850.62	-545.37	12,192.25	12,204.24	0.00	0.00	0.00
18,200.00	89.99	89.881	6,850.64	-545.16	12,292.25	12,304.16	0.00	0.00	0.00
18,300.00	89.99	89.881	6,850.67	-544.95	12,392.25	12,404.08	0.00	0.00	0.00
18,400.00	89.99	89.881	6,850.69	-544.74	12,492.25	12,503.99	0.00	0.00	0.00
18,500.00	89.99	89.881	6,850.72	-544.53	12,592.25	12,603.91	0.00	0.00	0.00
18,600.00	89.99	89.881	6,850.74	-544.33	12,692.25	12,703.82	0.00	0.00	0.00
18,700.00	89.99	89.881	6,850.76	-544.12	12,792.25	12,803.74	0.00	0.00	0.00
18,800.00	89.99	89.881	6,850.79	-543.91	12,892.25	12,903.65	0.00	0.00	0.00
18,900.00	89.99	89.881	6,850.81	-543.70	12,992.25	13,003.57	0.00	0.00	0.00
19,000.00	89.99	89.881	6,850.84	-543.49	13,092.25	13,103.48	0.00	0.00	0.00
19,100.00	89.99	89.881	6,850.86	-543.28	13,192.25	13,203.40	0.00	0.00	0.00
19,200.00	89.99	89.881	6,850.89	-543.08	13,292.24	13,303.31	0.00	0.00	0.00
19,300.00	89.99	89.881	6,850.91	-542.87	13,392.24	13,403.23	0.00	0.00	0.00
19,400.00	89.99	89.881	6,850.93	-542.66	13,492.24	13,503.14	0.00	0.00	0.00
19,500.00	89.99	89.881	6,850.96	-542.45	13,592.24	13,603.06	0.00	0.00	0.00
19,600.00	89.99	89.881	6,850.98	-542.24	13,692.24	13,702.97	0.00	0.00	0.00
19,673.90	89.99	89.881	6,851.00	-542.11	13,766.14	13,776.81	0.00	0.00	0.00
19,700.00	89.99	89.881	6,851.01	-542.06	13,792.24	13,802.89	0.00	0.00	0.00
19,773.90	89.99	89.881	6,851.02	-541.90	13,866.14	13,876.73	0.00	0.00	0.00



Lonestar Consulting, LLC Planning Report



Database:	Grand Junction	Local Co-ordinate Reference:	Well Allison Unit 611H
Company:	Hilcorp Energy Corp.	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Project:	San Juan, NM NAD27	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site:	Allison Unit 611H	North Reference:	True
Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral		
Design:	Plan #2		

Design Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(ft)	(ft)	(ft)	(usft)	(usft)		
AU 611H LP	0.00	0.000	6,848.00	-567.91	1,378.42	2,182,721.41	592,760.99	36.9980690	-107.5156838
- plan hits target center									
- Point									
AU 611H BHL	0.00	0.000	6,851.00	-542.11	13,766.14	2,182,787.93	605,148.53	36.9981306	-107.4732639
- plan hits target center									
- Point									

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
2,078.61	2,062.00	OJO ALAMO (SS)		0.00	0.000
2,179.94	2,162.00	KIRTLAND (SHALE + coal)		0.00	0.000
2,599.43	2,576.00	FRUITLAND (shale + COAL)		0.00	0.000
2,988.52	2,960.00	PICTURED CLIFFS (ss)		0.00	0.000
3,505.28	3,470.00	LEWIS SHALE		0.00	0.000
4,953.23	4,899.00	CLIFFHOUSE		0.00	0.000
5,319.02	5,260.00	MENEFEE		0.00	0.000
5,527.75	5,466.00	POINT LOOKOUT		0.00	0.000
6,056.67	5,988.00	MANCOS		0.00	0.000
6,587.54	6,503.00	MANCOS A		0.00	0.000
6,810.42	6,679.00	MANCOS B		0.00	0.000
7,235.72	6,846.00	MANCOS B TARGET		0.00	0.000



Hilcorp Energy Corp.

San Juan, NM NAD27

Allison Unit 611H

Allison Unit 611H

Pilot

Plan #2

Anticollision Report

08 August, 2023





Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Pilot	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Reference	Plan #2		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum centre distance of 15,000.00ft	Error Surface:	Pedal Curve
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program		Date	8/8/2023		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.00	7,749.60	Plan #2 (Pilot)	MWD+HDGM	OWSG MWD + HDGM	

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Allison Unit 611H						
Allison 13N - OH - As Drilled	498.37	495.75	22.74	5.99	1.358	Level 3, CC
Allison 13N - OH - As Drilled	500.00	497.38	22.74	5.99	1.357	Level 3, ES, SF
Allison 13P - OH - As Drilled	828.25	832.10	40.71	36.30	9.229	CC
Allison 13P - OH - As Drilled	1,200.00	1,205.11	43.31	36.09	5.997	ES
Allison 13P - OH - As Drilled	1,400.00	1,405.13	46.34	37.40	5.185	SF
Allison Unit 611H - Lateral - Plan #2	600.00	600.00	0.00	-4.15	0.000	Level 3, CC, SF
Allison Unit 611H - Lateral - Plan #2	6,378.00	6,378.00	0.03	-50.66	0.001	Level 3, ES

Offset Design: Allison Unit 611H - Allison 13N - OH - As Drilled													Offset Site Error:	0.00 ft
Survey Program: 266-MWD SDI				Semi Major Axis			Offset Wellbore Centre			Rule Assigned:			Offset Well Error:	15.00 ft
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	+N/-S	+E/-W	Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning	
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)			
0.00	0.00	0.00	0.00	0.00	15.00	-0.73	22.94	-0.29	23.13					
100.00	100.00	96.93	96.93	0.30	15.00	-0.76	23.11	-0.31	23.12	7.82	15.30	1.511		
200.00	200.00	196.84	196.84	0.66	15.00	-0.85	23.67	-0.35	23.67	8.02	15.66	1.512		
300.00	300.00	296.92	296.91	1.01	15.00	-0.64	24.50	-0.28	24.50	8.48	16.02	1.530		
400.00	400.00	397.51	397.43	1.37	15.01	6.98	23.52	2.88	23.70	7.32	16.38	1.447	Level 3	
498.37	498.37	495.75	495.38	1.73	15.02	25.44	20.54	9.77	22.74	5.99	16.75	1.358	Level 3, CC	
500.00	500.00	497.38	497.00	1.73	15.02	25.87	20.47	9.92	22.74	5.99	16.76	1.357	Level 3, ES, SF	
600.00	599.98	596.97	595.80	2.08	15.04	-73.14	14.46	20.86	24.85	7.74	17.11	1.452	Level 3	
700.00	699.84	696.38	694.23	2.42	15.06	-57.28	7.46	32.94	29.63	12.20	17.43	1.700		
800.00	799.45	796.38	793.11	2.77	15.10	-48.85	-0.54	45.53	33.86	16.07	17.79	1.904		
900.00	898.70	895.80	891.32	3.13	15.14	-45.20	-9.06	58.34	36.34	18.20	18.14	2.003		
964.00	961.97	959.03	953.58	3.37	15.17	-44.19	-14.82	67.78	37.93	19.57	18.35	2.066		
1,000.00	997.50	994.54	988.42	3.51	15.19	-43.59	-18.28	73.72	39.13	20.66	18.47	2.119		
1,100.00	1,096.19	1,093.04	1,084.51	3.90	15.27	-40.16	-29.06	92.48	44.75	25.97	18.78	2.383		
1,200.00	1,194.89	1,190.88	1,179.00	4.30	15.37	-35.31	-41.61	114.49	53.97	34.93	19.04	2.835		
1,300.00	1,293.58	1,288.65	1,272.44	4.70	15.49	-29.58	-56.83	138.89	66.24	46.94	19.30	3.432		
1,400.00	1,392.27	1,386.16	1,364.90	5.11	15.65	-24.55	-73.78	164.79	80.94	61.36	19.58	4.134		
1,500.00	1,490.96	1,480.79	1,453.65	5.52	15.85	-20.08	-92.51	191.76	98.69	78.98	19.71	5.007		
1,600.00	1,589.65	1,572.80	1,538.23	5.94	16.08	-16.86	-112.27	222.06	121.81	102.04	19.77	6.160		
1,700.00	1,688.34	1,671.35	1,628.27	6.36	16.35	-14.92	-132.98	256.37	146.91	126.62	20.29	7.241		
1,800.00	1,787.03	1,767.47	1,716.42	6.78	16.64	-13.09	-154.13	288.30	170.94	150.26	20.68	8.268		

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Pilot	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison 13N - OH - As Drilled												Offset Site Error:	0.00 ft
Survey Program: 266-MWD SDI												Offset Well Error:	15.00 ft
Reference		Offset		Semi Major Axis		Highside Toolface	Offset Wellbore Centre		Distance		Minimum Separation	Separation Factor	Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset		+N/-S	+E/-W	Between Centres	Between Ellipses			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
1,900.00	1,885.72	1,862.01	1,802.51	7.20	16.97	-11.37	-176.47	320.36	196.47	175.45	21.02	9.346	
2,000.00	1,984.41	1,958.58	1,890.50	7.62	17.32	-10.40	-198.01	353.82	222.23	200.75	21.48	10.346	
2,100.00	2,083.11	2,055.50	1,978.68	8.04	17.70	-9.64	-219.74	387.69	248.38	226.42	21.96	11.311	
2,200.00	2,181.80	2,156.55	2,071.23	8.46	18.10	-9.35	-240.40	422.54	273.21	250.64	22.57	12.104	
2,300.00	2,280.49	2,253.34	2,160.17	8.89	18.51	-9.24	-259.39	455.69	297.43	274.37	23.06	12.899	
2,400.00	2,379.18	2,348.31	2,247.08	9.31	18.95	-8.90	-279.53	488.23	322.40	298.90	23.50	13.716	
2,500.00	2,477.87	2,441.00	2,331.92	9.74	19.39	-8.35	-300.51	519.15	347.25	323.35	23.90	14.530	
2,600.00	2,576.56	2,529.82	2,412.35	10.16	19.87	-7.75	-322.14	549.94	374.19	349.97	24.22	15.450	
2,700.00	2,675.25	2,627.03	2,499.95	10.59	20.40	-7.42	-344.93	585.43	402.41	377.65	24.77	16.248	
2,800.00	2,773.94	2,725.02	2,588.39	11.02	20.95	-7.18	-367.42	621.13	430.34	405.00	25.33	16.986	
2,900.00	2,872.64	2,833.43	2,687.14	11.44	21.55	-7.07	-390.62	659.33	456.37	430.26	26.11	17.479	
3,000.00	2,971.33	2,938.96	2,784.29	11.87	22.11	-7.15	-410.94	695.19	480.15	453.35	26.80	17.914	
3,100.00	3,070.02	3,034.88	2,872.77	12.30	22.63	-7.17	-429.56	727.23	503.49	476.16	27.32	18.427	
3,200.00	3,168.71	3,131.21	2,961.76	12.73	23.17	-7.19	-448.07	759.11	526.45	498.59	27.86	18.898	
3,300.00	3,267.40	3,220.78	3,044.03	13.16	23.70	-7.01	-467.39	788.78	550.60	522.31	28.28	19.467	
3,400.00	3,366.09	3,304.58	3,120.39	13.58	24.23	-6.79	-486.59	817.45	576.44	547.82	28.62	20.138	
3,500.00	3,464.78	3,392.48	3,199.68	14.01	24.83	-6.54	-507.91	848.86	604.37	575.33	29.05	20.806	
3,600.00	3,563.47	3,484.34	3,282.10	14.44	25.46	-6.28	-530.71	882.38	633.32	603.77	29.55	21.432	
3,700.00	3,662.17	3,590.25	3,377.53	14.87	26.17	-6.09	-555.95	920.76	661.53	631.24	30.29	21.841	
3,800.00	3,760.86	3,705.06	3,481.80	15.30	26.92	-5.88	-582.61	960.73	688.19	657.05	31.14	22.101	
3,900.00	3,859.55	3,823.65	3,591.08	15.73	27.65	-5.72	-608.12	999.06	711.60	679.60	32.00	22.238	
4,000.00	3,958.24	3,931.36	3,691.32	16.16	28.28	-5.61	-629.81	1,032.00	732.69	699.99	32.70	22.410	
4,100.00	4,056.93	4,040.23	3,793.09	16.59	28.91	-5.58	-650.40	1,064.72	752.70	719.30	33.40	22.537	
4,200.00	4,155.62	4,152.56	3,898.76	17.02	29.53	-5.61	-669.99	1,097.39	771.06	736.94	34.13	22.595	
4,300.00	4,254.31	4,300.60	4,039.96	17.45	30.27	-5.81	-691.19	1,136.37	785.38	750.25	35.13	22.358	
4,400.00	4,353.00	4,448.15	4,183.29	17.88	30.86	-5.97	-708.31	1,166.83	793.03	757.06	35.97	22.049	
4,500.00	4,451.70	4,609.64	4,342.18	18.31	31.37	-6.20	-721.55	1,192.15	795.01	758.33	36.68	21.674	
4,600.00	4,550.39	4,754.45	4,486.09	18.73	31.67	-6.35	-729.59	1,205.95	790.16	752.98	37.18	21.251	
4,700.00	4,649.08	4,875.01	4,606.49	19.16	31.83	-6.48	-732.84	1,210.91	778.66	741.04	37.63	20.693	
4,785.53	4,733.49	4,875.01	4,606.49	19.53	31.83	-6.48	-732.84	1,210.91	773.95	735.85	38.11	20.310	
4,800.00	4,747.77	4,875.01	4,606.49	19.59	31.83	-6.48	-732.84	1,210.91	774.09	735.94	38.15	20.292	
4,900.00	4,846.46	4,875.01	4,606.49	20.02	31.83	-6.48	-732.84	1,210.91	782.37	744.27	38.10	20.532	
5,000.00	4,945.15	4,875.01	4,606.49	20.45	31.83	-6.48	-732.84	1,210.91	803.12	765.58	37.54	21.395	
5,100.00	5,043.84	4,875.01	4,606.49	20.88	31.83	-6.48	-732.84	1,210.91	835.40	798.84	36.56	22.851	
5,200.00	5,142.53	4,875.01	4,606.49	21.31	31.83	-6.48	-732.84	1,210.91	877.95	842.64	35.30	24.869	
5,300.00	5,241.22	4,875.01	4,606.49	21.75	31.83	-6.48	-732.84	1,210.91	929.34	895.44	33.90	27.412	
5,400.00	5,339.92	4,875.01	4,606.49	22.18	31.83	-6.48	-732.84	1,210.91	988.22	955.75	32.47	30.437	
5,500.00	5,438.61	4,875.01	4,606.49	22.61	31.83	-6.48	-732.84	1,210.91	1,053.31	1,022.24	31.07	33.899	
5,600.00	5,537.30	4,875.01	4,606.49	23.04	31.83	-6.48	-732.84	1,210.91	1,123.55	1,093.79	29.76	37.752	
5,700.00	5,635.99	4,875.01	4,606.49	23.47	31.83	-6.48	-732.84	1,210.91	1,198.02	1,169.46	28.56	41.948	
5,800.00	5,734.68	4,875.01	4,606.49	23.90	31.83	-6.48	-732.84	1,210.91	1,275.99	1,248.51	27.48	46.438	
5,900.00	5,833.37	4,875.01	4,606.49	24.33	31.83	-6.48	-732.84	1,210.91	1,356.85	1,330.34	26.51	51.175	
6,000.00	5,932.06	4,875.01	4,606.49	24.76	31.83	-6.48	-732.84	1,210.91	1,440.12	1,414.45	25.66	56.114	
6,100.00	6,030.75	4,875.01	4,606.49	25.19	31.83	-6.48	-732.84	1,210.91	1,525.40	1,500.48	24.92	61.211	
6,200.00	6,129.45	4,875.01	4,606.49	25.62	31.83	-6.48	-732.84	1,210.91	1,612.37	1,588.09	24.27	66.427	
6,300.00	6,228.14	4,875.01	4,606.49	26.05	31.83	-6.48	-732.84	1,210.91	1,700.77	1,677.06	23.71	71.724	
6,400.00	6,326.83	4,875.01	4,606.49	26.48	31.83	-6.48	-732.84	1,210.91	1,790.39	1,767.16	23.23	77.069	
6,411.02	6,337.70	4,875.01	4,606.49	26.53	31.83	-6.48	-732.84	1,210.91	1,800.34	1,777.16	23.18	77.659	
6,500.00	6,425.73	4,875.01	4,606.49	26.90	31.83	-6.94	-732.84	1,210.91	1,881.62	1,858.78	22.84	82.393	
6,600.00	6,525.08	4,875.01	4,606.49	27.29	31.83	-7.60	-732.84	1,210.91	1,974.95	1,952.41	22.54	87.608	
6,700.00	6,624.77	4,875.01	4,606.49	27.66	31.83	-8.46	-732.84	1,210.91	2,070.01	2,047.67	22.34	92.679	
6,800.00	6,724.67	4,875.01	4,606.49	28.00	31.83	-9.61	-732.84	1,210.91	2,166.46	2,144.25	22.20	97.577	

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Pilot	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison 13N - OH - As Drilled													Offset Site Error:	0.00 ft
Survey Program: 266-MWD SDI													Offset Well Error:	15.00 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Rule Assigned:		Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
6,875.02	6,799.68	4,875.01	4,606.49	28.23	31.83	113.96	-732.84	1,210.91	2,239.55	2,217.40	22.15	101.127		
6,900.00	6,824.66	4,875.01	4,606.49	28.30	31.83	113.96	-732.84	1,210.91	2,263.98	2,241.85	22.13	102.287		
7,000.00	6,924.66	4,875.01	4,606.49	28.59	31.83	113.96	-732.84	1,210.91	2,361.92	2,339.82	22.10	106.895		
7,100.00	7,024.66	4,875.01	4,606.49	28.88	31.83	113.96	-732.84	1,210.91	2,460.02	2,437.94	22.08	111.405		
7,200.00	7,124.66	4,875.01	4,606.49	29.17	31.83	113.96	-732.84	1,210.91	2,558.27	2,536.18	22.09	115.815		
7,300.00	7,224.66	4,875.01	4,606.49	29.46	31.83	113.96	-732.84	1,210.91	2,656.65	2,634.53	22.12	120.121		
7,400.00	7,324.66	4,875.01	4,606.49	29.76	31.83	113.96	-732.84	1,210.91	2,755.14	2,732.98	22.16	124.323		
7,500.00	7,424.66	4,875.01	4,606.49	30.06	31.83	113.96	-732.84	1,210.91	2,853.74	2,831.52	22.22	128.418		
7,600.00	7,524.66	4,875.01	4,606.49	30.35	31.83	113.96	-732.84	1,210.91	2,952.44	2,930.14	22.30	132.408		
7,700.00	7,624.66	4,875.01	4,606.49	30.65	31.83	113.96	-732.84	1,210.91	3,051.21	3,028.83	22.39	136.291		
7,750.34	7,675.00	4,875.01	4,606.49	30.80	31.83	113.96	-732.84	1,210.91	3,100.97	3,078.53	22.44	138.205		



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Pilot	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison 13P - OH - As Drilled												Offset Site Error:	0.00 ft
Survey Program: 357-MWD SDI												Offset Well Error:	0.00 ft
Reference												Rule Assigned:	
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Distance		Minimum Separation	Separation Factor	Warning
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	(ft)		
0.00	0.00	0.01	0.01	0.00	0.00	-90.41	-0.37	-50.82	50.82				
100.00	100.00	100.15	100.15	0.30	0.11	-90.52	-0.46	-50.68	50.68	50.27	0.41	123.393	
200.00	200.00	200.29	200.29	0.66	0.23	-90.84	-0.73	-50.26	50.27	49.38	0.88	56.982	
300.00	300.00	300.42	300.42	1.01	0.34	-91.38	-1.19	-49.56	49.58	48.23	1.35	36.629	
400.00	400.00	400.25	400.24	1.37	0.49	-92.12	-1.81	-48.73	48.76	46.90	1.86	26.183	
500.00	500.00	501.36	501.33	1.73	0.70	-93.24	-2.69	-47.42	47.51	45.08	2.43	19.540	
600.00	599.98	602.67	602.45	2.08	0.94	138.41	-6.35	-42.71	44.53	41.52	3.01	14.793	
700.00	699.84	703.46	702.77	2.42	1.21	132.93	-13.14	-35.67	42.51	38.91	3.60	11.800	
800.00	799.45	803.86	802.27	2.77	1.50	126.76	-21.99	-25.66	40.80	36.57	4.23	9.637	
828.25	827.53	832.10	830.25	2.87	1.58	125.58	-24.51	-22.76	40.71	36.30	4.41	9.229 CC	
900.00	898.70	904.00	901.47	3.13	1.78	123.99	-30.91	-15.29	41.15	36.28	4.87	8.454	
964.00	961.97	968.30	965.05	3.37	1.99	123.34	-37.17	-8.00	42.02	36.72	5.30	7.922	
1,000.00	997.50	1,004.56	1,000.82	3.51	2.12	122.77	-41.06	-3.47	42.50	36.93	5.56	7.639	
1,100.00	1,096.19	1,104.77	1,099.19	3.90	2.51	118.03	-53.64	10.84	42.96	36.62	6.34	6.778	
1,200.00	1,194.89	1,205.11	1,196.86	4.30	2.95	108.17	-69.24	27.68	43.31	36.09	7.22	5.997 ES	
1,300.00	1,293.58	1,305.23	1,293.66	4.70	3.43	95.26	-86.11	46.88	44.26	36.13	8.13	5.441	
1,400.00	1,392.27	1,405.13	1,390.05	5.11	3.89	82.25	-102.52	67.37	46.34	37.40	8.94	5.185 SF	
1,500.00	1,490.96	1,503.68	1,484.99	5.52	4.37	70.40	-118.98	88.05	50.69	41.06	9.63	5.266	
1,600.00	1,589.65	1,603.30	1,580.94	5.94	4.84	61.48	-136.88	107.99	58.22	47.98	10.24	5.684	
1,700.00	1,688.34	1,703.70	1,678.03	6.36	5.30	55.04	-153.16	127.66	65.04	54.19	10.85	5.995	
1,800.00	1,787.03	1,802.71	1,773.80	6.78	5.78	50.00	-169.17	147.01	72.46	61.02	11.44	6.333	
1,900.00	1,885.72	1,902.71	1,870.60	7.20	6.24	46.06	-185.31	166.29	80.26	68.21	12.04	6.664	
2,000.00	1,984.41	2,002.44	1,967.30	7.62	6.70	43.50	-201.50	184.50	88.23	75.56	12.67	6.966	
2,100.00	2,083.11	2,101.13	2,062.97	8.04	7.18	41.53	-217.83	202.35	96.62	83.32	13.29	7.268	
2,200.00	2,181.80	2,201.64	2,160.33	8.46	7.66	39.66	-234.54	220.91	105.28	91.34	13.94	7.553	
2,300.00	2,280.49	2,299.80	2,255.39	8.89	8.14	38.15	-251.04	238.99	114.20	99.64	14.56	7.842	
2,400.00	2,379.18	2,399.46	2,351.74	9.31	8.64	36.74	-268.29	257.75	123.81	108.60	15.20	8.143	
2,500.00	2,477.87	2,499.82	2,448.87	9.74	9.11	35.43	-285.06	276.66	132.91	117.07	15.84	8.390	
2,600.00	2,576.56	2,602.00	2,548.10	10.16	9.57	34.51	-301.17	294.93	140.82	124.31	16.51	8.531	
2,700.00	2,675.25	2,701.34	2,644.82	10.59	10.00	33.89	-316.11	311.94	147.78	130.63	17.15	8.616	
2,800.00	2,773.94	2,799.90	2,740.60	11.02	10.46	33.51	-332.15	328.75	155.90	138.09	17.81	8.754	
2,900.00	2,872.64	2,904.36	2,842.44	11.44	10.91	33.37	-348.23	345.53	162.82	144.29	18.52	8.789	
3,000.00	2,971.33	3,011.89	2,948.20	11.87	11.31	33.69	-361.12	359.99	165.51	146.26	19.25	8.598	
3,100.00	3,070.02	3,116.12	3,051.26	12.30	11.65	34.24	-370.79	372.16	165.02	145.07	19.95	8.273	
3,200.00	3,168.71	3,222.82	3,157.38	12.73	11.92	35.95	-378.25	380.27	160.96	140.27	20.69	7.779	
3,300.00	3,267.40	3,316.01	3,250.40	13.16	12.10	38.42	-382.11	383.99	153.50	131.98	21.52	7.132	
3,304.45	3,271.79	3,316.01	3,250.40	13.17	12.10	38.42	-382.11	383.99	153.50	131.96	21.54	7.125	
3,400.00	3,366.09	3,316.01	3,250.40	13.58	12.10	38.42	-382.11	383.99	181.88	162.93	18.95	9.598	
3,500.00	3,464.78	3,316.01	3,250.40	14.01	12.10	38.42	-382.11	383.99	250.20	235.25	14.95	16.739	
3,600.00	3,563.47	3,316.01	3,250.40	14.44	12.10	38.42	-382.11	383.99	334.84	322.40	12.44	26.914	
3,700.00	3,662.17	3,316.01	3,250.40	14.87	12.10	38.42	-382.11	383.99	426.19	415.16	11.03	38.640	
3,800.00	3,760.86	3,316.01	3,250.40	15.30	12.10	38.42	-382.11	383.99	520.72	510.50	10.22	50.932	
3,900.00	3,859.55	3,316.01	3,250.40	15.73	12.10	38.42	-382.11	383.99	616.99	607.23	9.76	63.241	
4,000.00	3,958.24	3,316.01	3,250.40	16.16	12.10	38.42	-382.11	383.99	714.28	704.79	9.49	75.291	
4,100.00	4,056.93	3,316.01	3,250.40	16.59	12.10	38.42	-382.11	383.99	812.22	802.88	9.34	86.955	
4,200.00	4,155.62	3,316.01	3,250.40	17.02	12.10	38.42	-382.11	383.99	910.62	901.34	9.28	98.178	
4,300.00	4,254.31	3,316.01	3,250.40	17.45	12.10	38.42	-382.11	383.99	1,009.33	1,000.06	9.26	108.948	
4,400.00	4,353.00	3,316.01	3,250.40	17.88	12.10	38.42	-382.11	383.99	1,108.27	1,098.98	9.29	119.266	
4,500.00	4,451.70	3,316.01	3,250.40	18.31	12.10	38.42	-382.11	383.99	1,207.39	1,198.04	9.35	129.146	
4,600.00	4,550.39	3,316.01	3,250.40	18.73	12.10	38.42	-382.11	383.99	1,306.64	1,297.21	9.43	138.602	
4,700.00	4,649.08	3,316.01	3,250.40	19.16	12.10	38.42	-382.11	383.99	1,405.99	1,396.47	9.52	147.652	
4,800.00	4,747.77	3,316.01	3,250.40	19.59	12.10	38.42	-382.11	383.99	1,505.44	1,495.80	9.63	156.311	

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Pilot	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison 13P - OH - As Drilled												Offset Site Error:	0.00 ft
Survey Program: 357-MWD SDI												Offset Well Error:	0.00 ft
Reference												Rule Assigned:	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
4,900.00	4,846.46	3,316.01	3,250.40	20.02	12.10	38.42	-382.11	383.99	1,604.95	1,595.20	9.75	164.597	
5,000.00	4,945.15	3,316.01	3,250.40	20.45	12.10	38.42	-382.11	383.99	1,704.52	1,694.64	9.88	172.524	
5,100.00	5,043.84	3,316.01	3,250.40	20.88	12.10	38.42	-382.11	383.99	1,804.13	1,794.11	10.02	180.108	
5,200.00	5,142.53	3,316.01	3,250.40	21.31	12.10	38.42	-382.11	383.99	1,903.79	1,893.63	10.16	187.363	
5,300.00	5,241.22	3,316.01	3,250.40	21.75	12.10	38.42	-382.11	383.99	2,003.48	1,993.17	10.31	194.301	
5,400.00	5,339.92	3,316.01	3,250.40	22.18	12.10	38.42	-382.11	383.99	2,103.20	2,092.73	10.47	200.935	
5,500.00	5,438.61	3,316.01	3,250.40	22.61	12.10	38.42	-382.11	383.99	2,202.94	2,192.32	10.63	207.278	
5,600.00	5,537.30	3,316.01	3,250.40	23.04	12.10	38.42	-382.11	383.99	2,302.71	2,291.92	10.79	213.340	
5,700.00	5,635.99	3,316.01	3,250.40	23.47	12.10	38.42	-382.11	383.99	2,402.50	2,391.53	10.96	219.132	
5,800.00	5,734.68	3,316.01	3,250.40	23.90	12.10	38.42	-382.11	383.99	2,502.30	2,491.16	11.14	224.664	
5,900.00	5,833.37	3,316.01	3,250.40	24.33	12.10	38.42	-382.11	383.99	2,602.12	2,590.81	11.32	229.947	
6,000.00	5,932.06	3,316.01	3,250.40	24.76	12.10	38.42	-382.11	383.99	2,701.95	2,690.46	11.50	234.989	
6,100.00	6,030.75	3,316.01	3,250.40	25.19	12.10	38.42	-382.11	383.99	2,801.80	2,790.11	11.68	239.801	
6,200.00	6,129.45	3,316.01	3,250.40	25.62	12.10	38.42	-382.11	383.99	2,901.65	2,889.78	11.87	244.390	
6,300.00	6,228.14	3,316.01	3,250.40	26.05	12.10	38.42	-382.11	383.99	3,001.52	2,989.45	12.07	248.764	
6,400.00	6,326.83	3,316.01	3,250.40	26.48	12.10	38.42	-382.11	383.99	3,101.39	3,089.13	12.26	252.932	
6,411.02	6,337.70	3,316.01	3,250.40	26.53	12.10	38.42	-382.11	383.99	3,112.40	3,100.12	12.28	253.380	
6,500.00	6,425.73	3,316.01	3,250.40	26.90	12.10	76.86	-382.11	383.99	3,201.31	3,188.85	12.46	256.882	
6,600.00	6,525.08	3,316.01	3,250.40	27.29	12.10	133.70	-382.11	383.99	3,301.26	3,288.59	12.67	260.600	
6,700.00	6,624.77	3,316.01	3,250.40	27.66	12.10	155.36	-382.11	383.99	3,401.11	3,388.23	12.88	264.103	
6,800.00	6,724.67	3,316.01	3,250.40	28.00	12.10	163.79	-382.11	383.99	3,500.77	3,487.68	13.09	267.394	
6,875.02	6,799.68	3,316.01	3,250.40	28.23	12.10	-68.07	-382.11	383.99	3,575.34	3,562.09	13.26	269.729	
6,900.00	6,824.66	3,316.01	3,250.40	28.30	12.10	-68.07	-382.11	383.99	3,600.14	3,586.83	13.31	270.485	
7,000.00	6,924.66	3,316.01	3,250.40	28.59	12.10	-68.07	-382.11	383.99	3,699.44	3,685.91	13.53	273.362	
7,100.00	7,024.66	3,316.01	3,250.40	28.88	12.10	-68.07	-382.11	383.99	3,798.78	3,785.02	13.76	276.089	
7,200.00	7,124.66	3,316.01	3,250.40	29.17	12.10	-68.07	-382.11	383.99	3,898.15	3,884.16	13.99	278.671	
7,300.00	7,224.66	3,316.01	3,250.40	29.46	12.10	-68.07	-382.11	383.99	3,997.55	3,983.33	14.22	281.116	
7,400.00	7,324.66	3,316.01	3,250.40	29.76	12.10	-68.07	-382.11	383.99	4,096.98	4,082.53	14.46	283.429	
7,500.00	7,424.66	3,316.01	3,250.40	30.06	12.10	-68.07	-382.11	383.99	4,196.44	4,181.75	14.69	285.614	
7,600.00	7,524.66	3,316.01	3,250.40	30.35	12.10	-68.07	-382.11	383.99	4,295.93	4,280.99	14.93	287.677	
7,700.00	7,624.66	3,316.01	3,250.40	30.65	12.10	-68.07	-382.11	383.99	4,395.43	4,380.26	15.18	289.623	
7,750.34	7,675.00	3,316.01	3,250.40	30.80	12.10	-68.07	-382.11	383.99	4,445.54	4,430.24	15.30	290.559	



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Pilot	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit 611H - Lateral - Plan #2														Offset Site Error:	0.00 ft
Survey Program: 0-MWD+HDGM														Offset Well Error:	0.00 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning		
600.00	599.98	600.00	599.98	2.08	2.08	-90.00	-0.99	1.43	0.00	-4.15	4.15	0.000	Level 3, CC, SF		
700.00	699.84	700.00	699.84	2.42	2.42	-90.00	-3.97	5.74	0.00	-4.83	4.83	0.000	Level 3		
800.00	799.45	800.00	799.45	2.77	2.77	-90.00	-8.94	12.90	0.00	-5.53	5.53	0.000	Level 3		
900.00	898.70	900.00	898.70	3.13	3.13	-90.00	-15.88	22.92	0.00	-6.26	6.26	0.000	Level 3		
964.00	961.97	964.00	961.97	3.37	3.37	-90.40	-21.35	30.82	0.00	-6.74	6.74	0.000	Level 3		
965.62	963.57	965.62	963.57	3.38	3.38	-99.28	-21.50	31.03	0.00	-6.75	6.75	0.000	Level 3		
1,000.00	997.50	1,000.00	997.50	3.51	3.51	-161.79	-24.66	35.59	0.00	-6.89	6.89	0.000	Level 3		
1,004.45	1,001.89	1,004.45	1,001.89	3.53	3.53	-163.42	-25.07	36.18	0.00	-6.92	6.92	0.000	Level 3		
1,100.00	1,096.19	1,100.00	1,096.19	3.90	3.90	-173.18	-33.84	48.84	0.00	-7.59	7.59	0.000	Level 3		
1,104.45	1,100.59	1,104.45	1,100.59	3.92	3.92	-173.31	-34.25	49.43	0.00	-7.62	7.63	0.000	Level 3		
1,200.00	1,194.89	1,200.00	1,194.89	4.30	4.30	-174.99	-43.03	62.10	0.00	-8.31	8.31	0.000	Level 3		
1,204.45	1,199.28	1,204.45	1,199.28	4.32	4.32	-175.03	-43.44	62.69	0.00	-8.34	8.35	0.000	Level 3		
1,300.00	1,293.58	1,300.00	1,293.58	4.70	4.70	-175.73	-52.21	75.35	0.00	-9.04	9.04	0.000	Level 3		
1,304.45	1,297.97	1,304.45	1,297.97	4.72	4.72	-175.75	-52.62	75.94	0.00	-9.07	9.07	0.000	Level 3		
1,400.00	1,392.27	1,400.00	1,392.27	5.11	5.11	-176.12	-61.40	88.61	0.00	-9.77	9.77	0.000	Level 3		
1,404.45	1,396.66	1,404.45	1,396.66	5.13	5.13	-176.14	-61.80	89.20	0.00	-9.80	9.80	0.000	Level 3		
1,500.00	1,490.96	1,500.00	1,490.96	5.52	5.52	-176.38	-70.58	101.86	0.01	-10.50	10.50	0.000	Level 3		
1,504.45	1,495.35	1,504.45	1,495.35	5.54	5.54	-176.38	-70.99	102.45	0.01	-10.53	10.54	0.000	Level 3		
1,600.00	1,589.65	1,600.00	1,589.65	5.94	5.94	-176.55	-79.76	115.12	0.01	-11.23	11.24	0.001	Level 3		
1,604.45	1,594.04	1,604.45	1,594.04	5.96	5.96	-176.55	-80.17	115.71	0.01	-11.27	11.27	0.001	Level 3		
1,700.00	1,688.34	1,700.00	1,688.34	6.36	6.36	-176.67	-88.95	128.37	0.01	-11.97	11.98	0.001	Level 3		
1,704.45	1,692.73	1,704.45	1,692.73	6.38	6.38	-176.68	-89.36	128.96	0.01	-12.00	12.01	0.001	Level 3		
1,800.00	1,787.03	1,800.00	1,787.03	6.78	6.78	-176.77	-98.13	141.62	0.01	-12.71	12.72	0.001	Level 3		
1,804.45	1,791.42	1,804.45	1,791.43	6.79	6.79	-176.77	-98.54	142.21	0.01	-12.74	12.75	0.001	Level 3		
1,900.00	1,885.72	1,900.00	1,885.73	7.20	7.20	-176.84	-107.31	154.88	0.01	-13.45	13.46	0.001	Level 3		
1,904.45	1,890.12	1,904.45	1,890.12	7.21	7.21	-176.85	-107.72	155.47	0.01	-13.48	13.49	0.001	Level 3		
2,000.00	1,984.41	2,000.00	1,984.42	7.62	7.62	-176.90	-116.50	168.13	0.01	-14.19	14.20	0.001	Level 3		
2,004.45	1,988.81	2,004.45	1,988.81	7.64	7.64	-176.91	-116.91	168.72	0.01	-14.23	14.24	0.001	Level 3		
2,100.00	2,083.11	2,100.00	2,083.11	8.04	8.04	-176.95	-125.68	181.39	0.01	-14.93	14.95	0.001	Level 3		
2,104.45	2,087.50	2,104.45	2,087.50	8.06	8.06	-176.96	-126.09	181.98	0.01	-14.97	14.98	0.001	Level 3		
2,200.00	2,181.80	2,200.00	2,181.80	8.46	8.46	-177.00	-134.87	194.64	0.01	-15.68	15.69	0.001	Level 3		
2,204.45	2,186.19	2,204.45	2,186.19	8.48	8.48	-177.00	-135.27	195.23	0.01	-15.71	15.72	0.001	Level 3		
2,300.00	2,280.49	2,300.00	2,280.49	8.89	8.89	-177.03	-144.05	207.90	0.01	-16.42	16.43	0.001	Level 3		
2,304.45	2,284.88	2,304.45	2,284.88	8.91	8.91	-177.03	-144.46	208.48	0.01	-16.46	16.47	0.001	Level 3		
2,400.00	2,379.18	2,400.00	2,379.18	9.31	9.31	-177.06	-153.23	221.15	0.01	-17.17	17.18	0.001	Level 3		
2,404.45	2,383.57	2,404.45	2,383.57	9.33	9.33	-177.06	-153.64	221.74	0.01	-17.20	17.21	0.001	Level 3		
2,500.00	2,477.87	2,500.00	2,477.87	9.74	9.74	-177.09	-162.42	234.40	0.01	-17.91	17.93	0.001	Level 3		
2,504.45	2,482.26	2,504.45	2,482.27	9.76	9.76	-177.09	-162.83	234.99	0.01	-17.95	17.96	0.001	Level 3		
2,600.00	2,576.56	2,600.00	2,576.56	10.16	10.16	-177.11	-171.60	247.66	0.02	-18.66	18.67	0.001	Level 3		
2,604.45	2,580.95	2,604.45	2,580.96	10.18	10.18	-177.11	-172.01	248.25	0.02	-18.69	18.71	0.001	Level 3		
2,700.00	2,675.25	2,700.00	2,675.26	10.59	10.59	-177.13	-180.78	260.91	0.02	-19.40	19.42	0.001	Level 3		
2,704.45	2,679.65	2,704.45	2,679.65	10.61	10.61	-177.13	-181.19	261.50	0.02	-19.44	19.45	0.001	Level 3		
2,800.00	2,773.94	2,800.00	2,773.95	11.02	11.02	-177.15	-189.97	274.17	0.02	-20.15	20.17	0.001	Level 3		
2,804.45	2,778.34	2,804.45	2,778.34	11.04	11.04	-177.15	-190.38	274.76	0.02	-20.18	20.20	0.001	Level 3		
2,900.00	2,872.64	2,900.00	2,872.64	11.44	11.44	-177.17	-199.15	287.42	0.02	-20.90	20.92	0.001	Level 3		
2,904.45	2,877.03	2,904.45	2,877.03	11.46	11.46	-177.17	-199.56	288.01	0.02	-20.93	20.95	0.001	Level 3		
3,000.00	2,971.33	3,000.00	2,971.33	11.87	11.87	-177.18	-208.34	300.67	0.02	-21.64	21.66	0.001	Level 3		
3,004.45	2,975.72	3,004.45	2,975.72	11.89	11.89	-177.18	-208.74	301.26	0.02	-21.68	21.70	0.001	Level 3		
3,100.00	3,070.02	3,100.00	3,070.02	12.30	12.30	-177.20	-217.52	313.93	0.02	-22.39	22.41	0.001	Level 3		
3,104.45	3,074.41	3,104.45	3,074.41	12.32	12.32	-177.20	-217.93	314.52	0.02	-22.43	22.45	0.001	Level 3		
3,200.00	3,168.71	3,200.00	3,168.71	12.73	12.73	-177.21	-226.70	327.18	0.02	-23.14	23.16	0.001	Level 3		
3,204.45	3,173.10	3,204.45	3,173.10	12.75	12.75	-177.21	-227.11	327.77	0.02	-23.17	23.19	0.001	Level 3		

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Pilot	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit 611H - Lateral - Plan #2														Offset Site Error:	0.00 ft		
Survey Program:		0-MWD+HDGM		Offset			Semi Major Axis			Offset Wellbore Centre			Rule Assigned:		Distance	Offset Well Error:	0.00 ft
Measured Depth	Reference	Measured Depth	Vertical	Reference	Offset	Highside Toolface	+N/-S	+E/-W	Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning				
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)						
3,300.00	3,267.40	3,300.00	3,267.40	13.16	13.16	-177.22	-235.89	340.44	0.02	-23.89	23.91	0.001 Level 3					
3,304.45	3,271.79	3,304.45	3,271.80	13.17	13.17	-177.22	-236.30	341.03	0.02	-23.92	23.94	0.001 Level 3					
3,400.00	3,366.09	3,400.00	3,366.10	13.58	13.58	-177.23	-245.07	353.69	0.02	-24.64	24.66	0.001 Level 3					
3,404.45	3,370.48	3,404.45	3,370.49	13.60	13.60	-177.23	-245.48	354.28	0.02	-24.67	24.69	0.001 Level 3					
3,500.00	3,464.78	3,500.00	3,464.79	14.01	14.01	-177.24	-254.25	366.95	0.02	-25.38	25.41	0.001 Level 3					
3,504.45	3,469.17	3,504.45	3,469.18	14.03	14.03	-177.24	-254.66	367.54	0.02	-25.42	25.44	0.001 Level 3					
3,600.00	3,563.47	3,600.00	3,563.48	14.44	14.44	-177.25	-263.44	380.20	0.03	-26.13	26.16	0.001 Level 3					
3,604.45	3,567.87	3,604.45	3,567.87	14.46	14.46	-177.25	-263.85	380.79	0.03	-26.17	26.19	0.001 Level 3					
3,700.00	3,662.17	3,700.00	3,662.17	14.87	14.87	-177.26	-272.62	393.45	0.03	-26.88	26.91	0.001 Level 3					
3,704.45	3,666.56	3,704.45	3,666.56	14.89	14.89	-177.26	-273.03	394.04	0.03	-26.92	26.94	0.001 Level 3					
3,800.00	3,760.86	3,800.00	3,760.86	15.30	15.30	-177.26	-281.81	406.71	0.03	-27.63	27.66	0.001 Level 3					
3,804.45	3,765.25	3,804.45	3,765.25	15.32	15.32	-177.26	-282.21	407.30	0.03	-27.66	27.69	0.001 Level 3					
3,900.00	3,859.55	3,900.00	3,859.55	15.73	15.73	-177.27	-290.99	419.96	0.03	-28.38	28.41	0.001 Level 3					
3,904.45	3,863.94	3,904.45	3,863.94	15.75	15.75	-177.27	-291.40	420.55	0.03	-28.41	28.44	0.001 Level 3					
4,000.00	3,958.24	4,000.00	3,958.24	16.16	16.16	-177.28	-300.17	433.22	0.03	-29.13	29.16	0.001 Level 3					
4,004.45	3,962.63	4,004.45	3,962.64	16.18	16.18	-177.28	-300.58	433.81	0.03	-29.16	29.19	0.001 Level 3					
4,100.00	4,056.93	4,100.00	4,056.94	16.59	16.59	-177.28	-309.36	446.47	0.03	-29.88	29.91	0.001 Level 3					
4,104.45	4,061.32	4,104.45	4,061.33	16.61	16.61	-177.28	-309.77	447.06	0.03	-29.91	29.94	0.001 Level 3					
4,200.00	4,155.62	4,200.00	4,155.63	17.02	17.02	-177.29	-318.54	459.73	0.03	-30.63	30.66	0.001 Level 3					
4,204.45	4,160.01	4,204.45	4,160.02	17.04	17.04	-177.29	-318.95	460.31	0.03	-30.66	30.69	0.001 Level 3					
4,300.00	4,254.31	4,300.00	4,254.32	17.45	17.45	-177.29	-327.72	472.98	0.03	-31.38	31.41	0.001 Level 3					
4,304.45	4,258.70	4,304.45	4,258.71	17.46	17.46	-177.29	-328.13	473.57	0.03	-31.41	31.44	0.001 Level 3					
4,400.00	4,353.00	4,400.00	4,353.01	17.88	17.88	-177.30	-336.91	486.23	0.03	-32.13	32.16	0.001 Level 3					
4,404.45	4,357.40	4,404.45	4,357.40	17.89	17.89	-177.30	-337.32	486.82	0.03	-32.16	32.19	0.001 Level 3					
4,500.00	4,451.70	4,500.00	4,451.70	18.31	18.30	-177.30	-346.09	499.49	0.03	-32.88	32.91	0.001 Level 3					
4,504.45	4,456.09	4,504.45	4,456.09	18.32	18.32	-177.30	-346.50	500.08	0.03	-32.91	32.94	0.001 Level 3					
4,600.00	4,550.39	4,600.00	4,550.39	18.73	18.73	-177.31	-355.28	512.74	0.03	-33.63	33.66	0.001 Level 3					
4,604.45	4,554.78	4,604.45	4,554.78	18.75	18.75	-177.31	-355.68	513.33	0.03	-33.66	33.69	0.001 Level 3					
4,700.00	4,649.08	4,700.00	4,649.08	19.16	19.16	-177.31	-364.46	526.00	0.04	-34.38	34.41	0.001 Level 3					
4,704.45	4,653.47	4,704.45	4,653.48	19.18	19.18	-177.31	-364.87	526.59	0.04	-34.41	34.45	0.001 Level 3					
4,800.00	4,747.77	4,800.00	4,747.77	19.59	19.59	-177.32	-373.64	539.25	0.04	-35.13	35.16	0.001 Level 3					
4,804.45	4,752.16	4,804.45	4,752.17	19.61	19.61	-177.32	-374.05	539.84	0.04	-35.16	35.20	0.001 Level 3					
4,900.00	4,846.46	4,900.00	4,846.47	20.02	20.02	-177.32	-382.83	552.50	0.04	-35.88	35.91	0.001 Level 3					
4,904.45	4,850.85	4,904.45	4,850.86	20.04	20.04	-177.32	-383.24	553.09	0.04	-35.91	35.95	0.001 Level 3					
5,000.00	4,945.15	5,000.00	4,945.16	20.45	20.45	-177.32	-392.01	565.76	0.04	-36.63	36.66	0.001 Level 3					
5,004.45	4,949.54	5,004.45	4,949.55	20.47	20.47	-177.32	-392.42	566.35	0.04	-36.66	36.70	0.001 Level 3					
5,100.00	5,043.84	5,100.00	5,043.85	20.88	20.88	-177.33	-401.19	579.01	0.04	-37.38	37.42	0.001 Level 3					
5,104.45	5,048.23	5,104.45	5,048.24	20.90	20.90	-177.33	-401.60	579.60	0.04	-37.41	37.45	0.001 Level 3					
5,200.00	5,142.53	5,200.00	5,142.54	21.31	21.31	-177.33	-410.38	592.27	0.04	-38.13	38.17	0.001 Level 3					
5,204.45	5,146.93	5,204.45	5,146.93	21.33	21.33	-177.33	-410.79	592.86	0.04	-38.16	38.20	0.001 Level 3					
5,300.00	5,241.22	5,300.00	5,241.23	21.75	21.74	-177.33	-419.56	605.52	0.04	-38.88	38.92	0.001 Level 3					
5,304.45	5,245.62	5,304.45	5,245.62	21.76	21.76	-177.33	-419.97	606.11	0.04	-38.91	38.95	0.001 Level 3					
5,400.00	5,339.92	5,400.00	5,339.92	22.18	22.17	-177.34	-428.75	618.78	0.04	-39.63	39.67	0.001 Level 3					
5,404.45	5,344.31	5,404.45	5,344.31	22.19	22.19	-177.34	-429.15	619.37	0.04	-39.66	39.70	0.001 Level 3					
5,500.00	5,438.61	5,500.00	5,438.61	22.61	22.61	-177.34	-437.93	632.03	0.04	-40.38	40.42	0.001 Level 3					
5,504.45	5,443.00	5,504.45	5,443.01	22.62	22.62	-177.34	-438.34	632.62	0.04	-40.41	40.45	0.001 Level 3					
5,600.00	5,537.30	5,600.00	5,537.31	23.04	23.04	-177.34	-447.11	645.28	0.04	-41.13	41.17	0.001 Level 3					
5,604.45	5,541.69	5,604.45	5,541.70	23.05	23.05	-177.34	-447.52	645.87	0.04	-41.16	41.20	0.001 Level 3					
5,700.00	5,635.99	5,700.00	5,636.00	23.47	23.47	-177.35	-456.30	658.54	0.05	-41.88	41.92	0.001 Level 3					
5,704.45	5,640.38	5,704.45	5,640.39	23.49	23.48	-177.35	-456.71	659.13	0.05	-41.91	41.96	0.001 Level 3					
5,800.00	5,734.68	5,800.00	5,734.69	23.90	23.90	-177.35	-465.48	671.79	0.05	-42.63	42.67	0.001 Level 3					
5,804.45	5,739.07	5,804.45	5,739.08	23.92	23.92	-177.35	-465.89	672.38	0.05	-42.66	42.71	0.001 Level 3					

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Pilot	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit 611H - Lateral - Plan #2												Offset Site Error:	0.00 ft
Survey Program: 0-MWD+HDGM												Offset Well Error:	0.00 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Semi Major Axis Offset	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Distance Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,900.00	5,833.37	5,900.00	5,833.38	24.33	24.33	-177.35	-474.66	685.05	0.05	-43.38	43.43	0.001	Level 3
5,904.45	5,837.76	5,904.45	5,837.77	24.35	24.35	-177.35	-475.07	685.64	0.05	-43.41	43.46	0.001	Level 3
6,000.00	5,932.06	6,000.00	5,932.07	24.76	24.76	-177.35	-483.85	698.30	0.05	-44.13	44.18	0.001	Level 3
6,004.45	5,936.46	6,004.45	5,936.46	24.78	24.78	-177.35	-484.26	698.89	0.05	-44.16	44.21	0.001	Level 3
6,100.00	6,030.75	6,100.00	6,030.76	25.19	25.19	-177.36	-493.03	711.56	0.05	-44.88	44.93	0.001	Level 3
6,104.45	6,035.15	6,104.45	6,035.15	25.21	25.21	-177.36	-493.44	712.14	0.05	-44.91	44.96	0.001	Level 3
6,200.00	6,129.45	6,200.00	6,129.45	25.62	25.62	-177.36	-502.22	724.81	0.05	-45.63	45.68	0.001	Level 3
6,204.45	6,133.84	6,204.45	6,133.85	25.64	25.64	-177.36	-502.62	725.40	0.05	-45.66	45.71	0.001	Level 3
6,300.00	6,228.14	6,300.00	6,228.15	26.05	26.05	-177.36	-511.40	738.06	0.05	-46.38	46.43	0.001	Level 3
6,378.00	6,305.11	6,378.00	6,305.12	26.38	26.39	-125.25	-518.56	748.44	0.03	-50.66	50.69	0.001	Level 3, ES
6,400.00	6,326.83	6,399.98	6,326.72	26.48	26.48	-38.08	-520.57	751.98	0.63	-49.01	49.64	0.013	Level 3
6,411.02	6,337.70	6,410.97	6,337.47	26.53	26.54	-36.68	-521.57	754.02	1.23	-48.31	49.54	0.025	Level 3
6,500.00	6,425.73	6,498.04	6,421.09	26.90	26.98	-32.22	-529.33	776.76	14.06	-34.91	48.97	0.287	Level 3
6,600.00	6,525.08	6,589.08	6,504.37	27.29	27.54	-31.11	-537.02	812.54	44.85	-3.04	47.89	0.937	Level 3
6,700.00	6,624.77	6,669.47	6,573.02	27.66	28.11	-30.90	-543.35	853.77	90.79	44.45	46.34	1.959	
6,800.00	6,724.67	6,737.89	6,627.00	28.00	28.65	-31.07	-548.30	895.47	149.21	104.61	44.60	3.346	
6,875.02	6,799.68	6,781.56	6,658.99	28.23	29.04	93.33	-551.22	925.04	199.64	156.34	43.30	4.611	
6,900.00	6,824.66	6,800.00	6,671.88	28.30	29.21	93.49	-552.40	938.17	217.51	173.99	43.52	4.998	
7,000.00	6,924.66	6,850.00	6,704.87	28.59	29.71	93.70	-555.40	975.61	292.08	250.05	42.03	6.949	
7,100.00	7,024.66	6,883.06	6,725.04	28.88	30.07	93.74	-557.22	1,001.74	370.87	330.98	39.89	9.298	
7,200.00	7,124.66	6,917.60	6,744.63	29.17	30.46	93.72	-558.99	1,030.12	453.24	414.59	38.65	11.727	
7,300.00	7,224.66	6,950.00	6,761.59	29.46	30.85	93.66	-560.52	1,057.68	538.36	500.61	37.75	14.260	
7,400.00	7,324.66	6,972.81	6,772.69	29.76	31.14	93.61	-561.51	1,077.58	625.64	588.97	36.67	17.062	
7,500.00	7,424.66	7,000.00	6,784.97	30.06	31.50	93.53	-562.61	1,101.81	714.72	678.59	36.13	19.783	
7,600.00	7,524.66	7,014.55	6,791.12	30.35	31.70	93.48	-563.15	1,114.99	805.16	769.92	35.24	22.851	
7,700.00	7,624.66	7,031.73	6,797.99	30.65	31.94	93.43	-563.76	1,130.72	896.81	862.13	34.68	25.856	
7,750.34	7,675.00	7,050.00	6,804.83	30.80	32.20	93.36	-564.36	1,147.65	943.48	908.65	34.83	27.090	

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Pilot	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Reference Depths are relative to GL 6354' & RKB 17' @ 6371.00ft

Coordinates are relative to: Allison Unit 611H

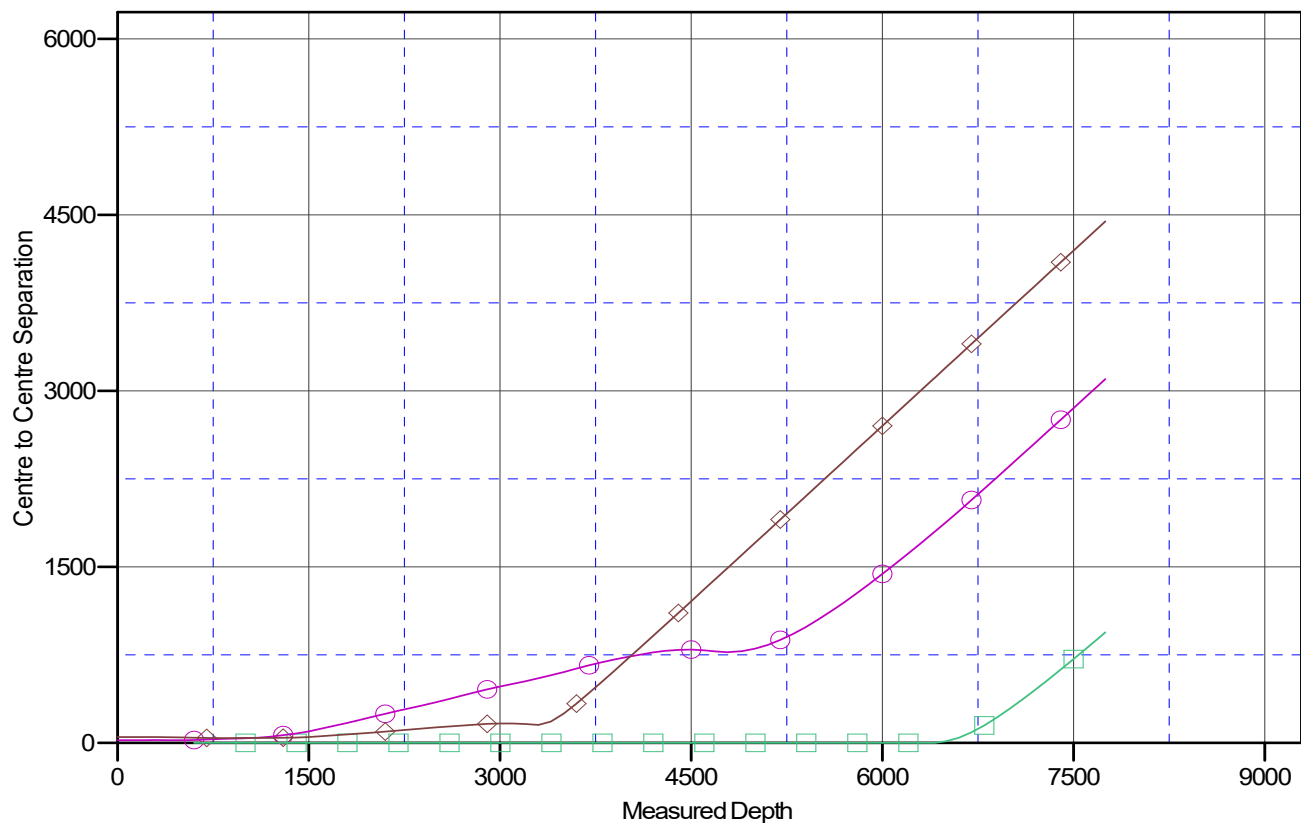
Offset Depths are relative to Offset Datum

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

Central Meridian is -107.8333334

Grid Convergence at Surface is: 0.19°

Ladder Plot



LEGEND

—●— Allison 13NOHAsDrilled V0
 —◆— Allison 13POHAsDrilled V0
 —■— Allison Unit 611H Later a/Plan #2 V0

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



Lonestar Consulting, LLC

Anticollision Report

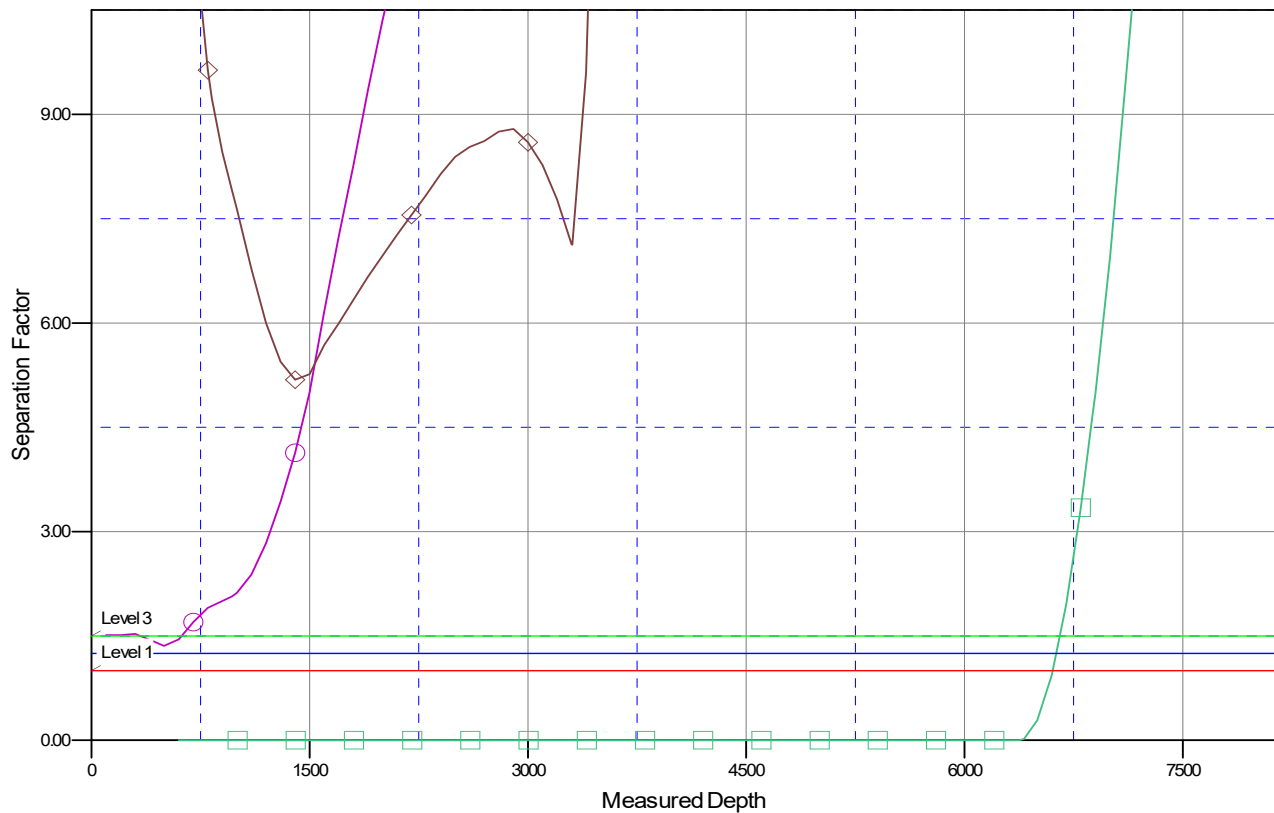


Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Pilot	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Reference Depths are relative to GL 6354' & RKB 17' @ 6371.00ft
 Offset Depths are relative to Offset Datum
 Central Meridian is -107.8333334

Coordinates are relative to: Allison Unit 611H
 Coordinate System is US State Plane 1927 (Exact solution), New Mexico West 30
 Grid Convergence at Surface is: 0.19°

Separation Factor Plot



LEGEND

—○— Allison 13NOHAsDrilled V0
 —◇— Allison 13POHAsDrilled V0
 —□— Allison Unit611HLater alPlan#2 V0



Hilcorp Energy Corp.

San Juan, NM NAD27

Allison Unit 611H

Allison Unit 611H

Lateral

Plan #2

Anticollision Report

08 August, 2023





Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Reference	Plan #2
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria
Interpolation Method:	Stations
Depth Range:	Unlimited
Results Limited by:	Maximum centre distance of 15,000.00ft
Warning Levels Evaluated at:	2.00 Sigma
Error Model:	ISCWSA
Scan Method:	Closest Approach 3D
Error Surface:	Pedal Curve
Casing Method:	Not applied

Survey Tool Program	Date	8/8/2023
From (ft)	To (ft)	Survey (Wellbore)
0.00	19,773.90	Plan #2 (Lateral)
		Tool Name
		MWD+HDGM
		Description
		OWSG MWD + HDGM

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Allison Unit 611H						
Allison 13N - OH - As Drilled	498.37	495.75	22.74	5.99	1.358	Level 3, CC
Allison 13N - OH - As Drilled	500.00	497.38	22.74	5.99	1.357	Level 3, ES, SF
Allison 13P - OH - As Drilled	828.25	832.10	40.71	36.30	9.229	CC
Allison 13P - OH - As Drilled	1,200.00	1,205.11	43.31	36.09	5.997	ES
Allison 13P - OH - As Drilled	1,400.00	1,405.13	46.34	37.40	5.185	SF
Allison Unit 061 - OH - OH	12,210.58	6,718.38	133.00	-241.64	0.355	Level 3, CC, ES, SF
Allison Unit 061M - OH - OH	10,538.10	6,767.93	1,222.04	896.24	3.751	CC
Allison Unit 061M - OH - OH	10,600.00	6,767.95	1,223.60	895.82	3.733	ES
Allison Unit 061M - OH - OH	10,700.00	6,767.97	1,232.72	902.41	3.732	SF
Allison Unit 061N - OH - OH	12,886.68	6,970.14	1,081.08	857.97	4.845	CC
Allison Unit 061N - OH - OH	12,900.00	6,969.91	1,081.17	857.61	4.836	ES
Allison Unit 061N - OH - OH	13,000.00	6,968.20	1,087.01	861.13	4.812	SF
Allison Unit 125S - Lateral - Lateral	3,091.67	5,306.65	1,693.72	1,632.73	27.770	CC, ES, SF
Allison Unit 125S - OH - OH	3,412.33	3,555.01	2,377.05	2,349.36	85.845	CC, ES
Allison Unit 125S - OH - OH	11,100.00	3,555.01	5,178.92	5,115.81	82.073	SF
Allison Unit 133 Lateral - Lateral #1 - As Drilled	12,600.00	3,007.00	4,013.94	3,962.52	78.062	CC
Allison Unit 133 Lateral - Lateral #1 - As Drilled	13,400.00	3,838.00	4,015.91	3,950.26	61.168	ES
Allison Unit 133 Lateral - Lateral #1 - As Drilled	15,200.00	4,721.00	4,176.14	4,084.30	45.472	SF
Allison Unit 133 Lateral - Original Hole - As Drilled	12,200.00	2,750.00	3,982.74	3,935.99	85.191	CC, ES
Allison Unit 133 Lateral - Original Hole - As Drilled	13,800.00	2,750.00	4,306.89	4,249.41	74.929	SF
Allison Unit 134S - OH - OH	14,798.05	3,055.01	3,771.00	3,649.01	30.914	CC
Allison Unit 134S - OH - OH	14,822.29	3,055.01	3,771.09	3,648.83	30.845	ES
Allison Unit 134S - OH - OH	16,500.00	3,055.01	4,138.36	3,988.58	27.629	SF
Allison Unit 47B - Original Hole - As Drilled	17,400.00	3,400.00	3,272.36	3,183.89	36.989	CC
Allison Unit 47B - Original Hole - As Drilled	17,500.00	3,400.00	3,275.15	3,182.97	35.530	ES
Allison Unit 47B - Original Hole - As Drilled	19,400.00	3,400.00	3,856.68	3,701.35	24.828	SF
Allison Unit 611H - Pilot - Plan #2	600.00	600.00	0.00	-4.15	0.000	Level 3, CC, SF
Allison Unit 611H - Pilot - Plan #2	6,400.00	6,399.99	0.63	-49.08	0.013	Level 3, ES
Allison Unit Com 138H - Lateral - Lateral	16,065.59	3,130.01	4,221.44	4,101.31	35.141	CC
Allison Unit Com 138H - Lateral - Lateral	16,100.00	3,130.01	4,221.58	4,101.15	35.056	ES
Allison Unit Com 138H - Lateral - Lateral	16,700.00	3,098.01	4,265.42	4,141.63	34.455	SF
Allison Unit Com 138H - Pilot - Pilot	15,737.70	3,539.01	4,117.10	3,985.02	31.171	CC
Allison Unit Com 138H - Pilot - Pilot	15,800.00	3,539.01	4,117.57	3,984.98	31.054	ES
Allison Unit Com 138H - Pilot - Pilot	16,400.00	3,539.01	4,170.02	4,033.64	30.577	SF
Allison Unit Com 138H - ST #2 - ST #2	16,085.75	3,131.01	4,230.62	4,109.92	35.051	CC
Allison Unit Com 138H - ST #2 - ST #2	16,122.36	3,131.01	4,230.78	4,109.76	34.960	ES
Allison Unit Com 138H - ST #2 - ST #2	16,500.00	3,100.01	4,249.76	4,127.03	34.627	SF

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Summary

Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Allison Unit 611H						
Allison Unit Com 150 - Lateral #1 - As Drilled	18,440.42	4,040.00	4,161.39	4,019.56	29.340	CC
Allison Unit Com 150 - Lateral #1 - As Drilled	18,500.00	4,040.00	4,161.82	4,019.35	29.213	ES
Allison Unit Com 150 - Lateral #1 - As Drilled	19,300.00	4,040.00	4,249.24	4,099.76	28.425	SF
Allison Unit Com 150 - Lateral #1 ST #1 - As Drilled	18,400.00	5,016.91	4,058.43	3,951.13	37.823	CC
Allison Unit Com 150 - Lateral #1 ST #1 - As Drilled	18,500.00	5,018.38	4,058.50	3,950.61	37.616	ES
Allison Unit Com 150 - Lateral #1 ST #1 - As Drilled	19,400.00	5,181.00	4,167.20	4,053.04	36.501	SF
Allison Unit Com 150 - Original Hole - As Drilled	18,428.44	2,591.00	4,846.53	4,633.92	22.795	CC
Allison Unit Com 150 - Original Hole - As Drilled	18,522.27	2,591.00	4,847.44	4,633.17	22.623	ES
Allison Unit Com 150 - Original Hole - As Drilled	19,400.00	2,591.00	4,942.96	4,717.08	21.883	SF

Offset Design: Allison Unit 611H - Allison 13N - OH - As Drilled

Offset Design: Allison Unit 611H - Allison 13N - OH - As Drilled													Offset Site Error:	0.00 ft
Survey Program: 266-MWD SDI				Rule Assigned:						Offset Well Error:		15.00 ft		
Reference	Offset	Semi Major Axis		Offset Wellbore Centre		Distance			Warning					
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	+N/-S	+E/-W	Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning	
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)			
0.00	0.00	0.00	0.00	0.00	15.00	-0.73	22.94	-0.29	23.13					
100.00	100.00	96.93	96.93	0.30	15.00	-0.76	23.11	-0.31	23.12	7.82	15.30	1.511		
200.00	200.00	196.84	196.84	0.66	15.00	-0.85	23.67	-0.35	23.67	8.02	15.66	1.512		
300.00	300.00	296.92	296.91	1.01	15.00	-0.64	24.50	-0.28	24.50	8.48	16.02	1.530		
400.00	400.00	397.51	397.43	1.37	15.01	6.98	23.52	2.88	23.70	7.32	16.38	1.447	Level 3	
498.37	498.37	495.75	495.38	1.73	15.02	25.44	20.54	9.77	22.74	5.99	16.75	1.358	Level 3, CC	
500.00	500.00	497.38	497.00	1.73	15.02	25.87	20.47	9.92	22.74	5.99	16.76	1.357	Level 3, ES, SF	
600.00	599.98	596.97	595.80	2.08	15.04	-73.14	14.46	20.86	24.85	7.74	17.11	1.452	Level 3	
700.00	699.84	696.38	694.23	2.42	15.06	-57.28	7.46	32.94	29.63	12.20	17.43	1.700		
800.00	799.45	796.38	793.11	2.77	15.10	-48.85	-0.54	45.53	33.86	16.07	17.79	1.904		
900.00	898.70	895.80	891.32	3.13	15.14	-45.20	-9.06	58.34	36.34	18.20	18.14	2.003		
963.97	961.95	959.00	953.55	3.37	15.17	-44.19	-14.82	67.78	37.92	19.57	18.35	2.066		
1,000.00	997.50	994.54	988.42	3.51	15.19	-43.59	-18.28	73.72	39.13	20.66	18.47	2.119		
1,100.00	1,096.19	1,093.04	1,084.51	3.90	15.27	-40.16	-29.06	92.48	44.75	25.97	18.78	2.383		
1,200.00	1,194.89	1,190.88	1,179.00	4.30	15.37	-35.30	-41.61	114.49	53.97	34.93	19.04	2.835		
1,300.00	1,293.58	1,288.65	1,272.44	4.70	15.49	-29.58	-56.83	138.89	66.24	46.94	19.30	3.432		
1,400.00	1,392.27	1,386.16	1,364.90	5.11	15.65	-24.55	-73.78	164.79	80.94	61.37	19.58	4.135		
1,500.00	1,490.96	1,480.79	1,453.65	5.52	15.85	-20.07	-92.51	191.76	98.70	78.99	19.71	5.007		
1,600.00	1,589.65	1,572.80	1,538.23	5.94	16.08	-16.86	-112.27	222.06	121.82	102.05	19.77	6.161		
1,700.00	1,688.34	1,671.35	1,628.27	6.36	16.35	-14.92	-132.98	256.37	146.91	126.62	20.29	7.241		
1,800.00	1,787.03	1,767.46	1,716.42	6.78	16.64	-13.09	-154.13	288.30	170.94	150.27	20.68	8.268		
1,900.00	1,885.73	1,862.00	1,802.50	7.20	16.97	-11.37	-176.47	320.36	196.48	175.46	21.02	9.347		
2,000.00	1,984.42	1,958.58	1,890.50	7.62	17.32	-10.40	-198.01	353.82	222.24	200.76	21.48	10.347		
2,100.00	2,083.11	2,055.50	1,978.67	8.04	17.70	-9.64	-219.74	387.69	248.39	226.43	21.96	11.311		
2,200.00	2,181.80	2,156.54	2,071.23	8.46	18.10	-9.35	-240.40	422.54	273.22	250.65	22.57	12.105		
2,300.00	2,280.49	2,253.34	2,160.17	8.89	18.51	-9.24	-259.39	455.69	297.44	274.38	23.06	12.899		
2,400.00	2,379.18	2,348.30	2,247.08	9.31	18.95	-8.90	-279.53	488.23	322.42	298.91	23.50	13.717		
2,500.00	2,477.87	2,441.00	2,331.92	9.74	19.39	-8.35	-300.51	519.15	347.26	323.36	23.90	14.530		
2,600.00	2,576.56	2,529.81	2,412.35	10.16	19.87	-7.75	-322.14	549.94	374.21	349.99	24.22	15.451		
2,700.00	2,675.26	2,627.03	2,499.94	10.59	20.40	-7.42	-344.93	585.43	402.43	377.66	24.77	16.248		
2,800.00	2,773.95	2,725.02	2,588.38	11.02	20.95	-7.18	-367.42	621.12	430.35	405.02	25.33	16.987		
2,900.00	2,872.64	2,833.42	2,687.14	11.44	21.55	-7.07	-390.62	659.33	456.39	430.28	26.11	17.480		
3,000.00	2,971.33	2,938.95	2,784.28	11.87	22.10	-7.15	-410.94	695.18	480.17	453.37	26.80	17.915		
3,100.00	3,070.02	3,034.88	2,872.76	12.30	22.63	-7.17	-429.56	727.23	503.51	476.18	27.32	18.428		

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison 13N - OH - As Drilled												Offset Site Error:	0.00 ft
Survey Program: 266-MWD SDI												Offset Well Error:	15.00 ft
Reference		Offset		Semi Major Axis		Highside Toolface	Offset Wellbore Centre		Distance		Minimum Separation	Separation Factor	Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset		+N/-S	+E/-W	Between Centres	Between Ellipses			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
3,200.00	3,168.71	3,131.20	2,961.75	12.73	23.17	-7.19	-448.07	759.10	526.47	498.61	27.86	18.898	
3,300.00	3,267.40	3,220.78	3,044.03	13.16	23.70	-7.01	-467.39	788.78	550.62	522.33	28.28	19.467	
3,400.00	3,366.10	3,304.57	3,120.39	13.58	24.23	-6.79	-486.59	817.45	576.46	547.84	28.62	20.139	
3,500.00	3,464.79	3,392.47	3,199.67	14.01	24.83	-6.54	-507.91	848.86	604.40	575.35	29.05	20.807	
3,600.00	3,563.48	3,484.33	3,282.09	14.44	25.46	-6.28	-530.71	882.38	633.34	603.79	29.55	21.433	
3,700.00	3,662.17	3,590.24	3,377.53	14.87	26.17	-6.09	-555.95	920.76	661.55	631.27	30.29	21.842	
3,800.00	3,760.86	3,705.05	3,481.80	15.30	26.92	-5.88	-582.61	960.73	688.22	657.08	31.14	22.102	
3,900.00	3,859.55	3,823.64	3,591.07	15.73	27.65	-5.72	-608.12	999.06	711.63	679.63	32.00	22.239	
4,000.00	3,958.24	3,931.36	3,691.31	16.16	28.28	-5.61	-629.81	1,032.00	732.71	700.02	32.70	22.411	
4,100.00	4,056.94	4,040.23	3,793.08	16.59	28.91	-5.58	-650.40	1,064.72	752.72	719.33	33.40	22.538	
4,200.00	4,155.63	4,152.55	3,898.75	17.02	29.53	-5.61	-669.99	1,097.39	771.09	736.97	34.13	22.596	
4,300.00	4,254.32	4,300.60	4,039.96	17.45	30.27	-5.81	-691.18	1,136.37	785.41	750.28	35.13	22.359	
4,400.00	4,353.01	4,448.15	4,183.29	17.88	30.86	-5.97	-708.31	1,166.83	793.06	757.09	35.97	22.050	
4,500.00	4,451.70	4,609.64	4,342.19	18.30	31.37	-6.20	-721.55	1,192.15	795.05	758.37	36.68	21.675	
4,600.00	4,550.39	4,754.45	4,486.09	18.73	31.67	-6.35	-729.59	1,205.96	790.20	753.02	37.18	21.252	
4,700.00	4,649.08	4,875.01	4,606.49	19.16	31.83	-6.48	-732.84	1,210.91	778.70	741.07	37.63	20.694	
4,785.53	4,733.49	4,875.01	4,606.49	19.53	31.83	-6.48	-732.84	1,210.91	773.99	735.88	38.11	20.311	
4,800.00	4,747.77	4,875.01	4,606.49	19.59	31.83	-6.48	-732.84	1,210.91	774.12	735.98	38.15	20.293	
4,900.00	4,846.47	4,875.01	4,606.49	20.02	31.83	-6.48	-732.84	1,210.91	782.41	744.30	38.10	20.533	
5,000.00	4,945.16	4,875.01	4,606.49	20.45	31.83	-6.48	-732.84	1,210.91	803.16	765.62	37.54	21.396	
5,100.00	5,043.85	4,875.01	4,606.49	20.88	31.83	-6.48	-732.84	1,210.91	835.44	798.88	36.56	22.852	
5,200.00	5,142.54	4,875.01	4,606.49	21.31	31.83	-6.48	-732.84	1,210.91	877.98	842.68	35.30	24.870	
5,300.00	5,241.23	4,875.01	4,606.49	21.74	31.83	-6.48	-732.84	1,210.91	929.38	895.48	33.90	27.412	
5,400.00	5,339.92	4,875.01	4,606.49	22.17	31.83	-6.48	-732.84	1,210.91	988.25	955.78	32.47	30.437	
5,500.00	5,438.61	4,875.01	4,606.49	22.61	31.83	-6.48	-732.84	1,210.91	1,053.34	1,022.27	31.07	33.899	
5,600.00	5,537.31	4,875.01	4,606.49	23.04	31.83	-6.48	-732.84	1,210.91	1,123.58	1,093.82	29.76	37.752	
5,700.00	5,636.00	4,875.01	4,606.49	23.47	31.83	-6.48	-732.84	1,210.91	1,198.05	1,169.49	28.56	41.948	
5,800.00	5,734.69	4,875.01	4,606.49	23.90	31.83	-6.48	-732.84	1,210.91	1,276.02	1,248.54	27.48	46.438	
5,900.00	5,833.38	4,875.01	4,606.49	24.33	31.83	-6.48	-732.84	1,210.91	1,356.88	1,330.36	26.51	51.175	
6,000.00	5,932.07	4,875.01	4,606.49	24.76	31.83	-6.48	-732.84	1,210.91	1,440.14	1,414.48	25.66	56.113	
6,100.00	6,030.76	4,875.01	4,606.49	25.19	31.83	-6.48	-732.84	1,210.91	1,525.42	1,500.50	24.92	61.210	
6,200.00	6,129.45	4,875.01	4,606.49	25.62	31.83	-6.48	-732.84	1,210.91	1,612.39	1,588.12	24.27	66.426	
6,300.00	6,228.15	4,875.01	4,606.49	26.05	31.83	-6.48	-732.84	1,210.91	1,700.79	1,677.08	23.71	71.723	
6,370.81	6,298.03	4,875.01	4,606.49	26.35	31.83	-6.48	-732.84	1,210.91	1,764.14	1,740.77	23.36	75.504	
6,400.00	6,326.74	4,875.01	4,606.49	26.48	31.83	-1.39	-732.84	1,210.91	1,790.15	1,766.93	23.22	77.094	
6,450.00	6,375.33	4,875.01	4,606.49	26.73	31.83	2.87	-732.84	1,210.91	1,833.63	1,810.68	22.95	79.904	
6,500.00	6,422.93	4,875.01	4,606.49	26.99	31.83	4.63	-732.84	1,210.91	1,875.60	1,852.96	22.65	82.814	
6,550.00	6,469.25	4,875.01	4,606.49	27.29	31.83	5.35	-732.84	1,210.91	1,915.92	1,893.59	22.33	85.808	
6,600.00	6,513.99	4,875.01	4,606.49	27.61	31.83	5.60	-732.84	1,210.91	1,954.44	1,932.44	21.99	88.871	
6,650.00	6,556.88	4,875.01	4,606.49	27.96	31.83	5.63	-732.84	1,210.91	1,991.03	1,969.39	21.64	91.990	
6,700.00	6,597.66	4,875.01	4,606.49	28.34	31.83	5.55	-732.84	1,210.91	2,025.59	2,004.30	21.29	95.144	
6,750.00	6,636.07	4,875.01	4,606.49	28.76	31.83	5.42	-732.84	1,210.91	2,058.00	2,037.06	20.93	98.307	
6,800.00	6,671.88	4,875.01	4,606.49	29.21	31.83	5.27	-732.84	1,210.91	2,088.17	2,067.58	20.59	101.403	
6,850.00	6,704.87	4,875.01	4,606.49	29.71	31.83	5.12	-732.84	1,210.91	2,116.02	2,095.74	20.28	104.362	
6,900.00	6,734.84	4,875.01	4,606.49	30.25	31.83	4.97	-732.84	1,210.91	2,141.46	2,121.48	19.98	107.192	
6,950.00	6,761.59	4,875.01	4,606.49	30.85	31.83	4.83	-732.84	1,210.91	2,164.43	2,144.73	19.71	109.837	
7,000.00	6,784.97	4,875.01	4,606.49	31.50	31.83	4.70	-732.84	1,210.91	2,184.87	2,165.40	19.47	112.234	
7,050.00	6,804.83	4,875.01	4,606.49	32.20	31.83	4.59	-732.84	1,210.91	2,202.72	2,183.45	19.27	114.313	
7,100.00	6,821.05	4,875.01	4,606.49	32.96	31.83	4.48	-732.84	1,210.91	2,217.93	2,198.81	19.12	116.007	
7,150.00	6,833.53	4,875.01	4,606.49	33.77	31.83	4.39	-732.84	1,210.91	2,230.47	2,211.45	19.02	117.250	
7,200.00	6,842.18	4,875.01	4,606.49	34.62	31.83	4.32	-732.84	1,210.91	2,240.30	2,221.32	18.99	117.987	
7,250.00	6,846.97	4,875.01	4,606.49	35.52	31.83	4.25	-732.84	1,210.91	2,247.41	2,228.39	19.02	118.176	

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison 13N - OH - As Drilled												Offset Site Error:	0.00 ft
Survey Program: 266-MWD SDI												Offset Well Error:	15.00 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (ft)	Separation Factor	Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)			
7,286.15	6,848.00	4,875.01	4,606.49	36.18	31.83	4.21	-732.84	1,210.91	2,250.83	2,231.75	19.08	117.963	
7,300.00	6,848.00	4,875.01	4,606.49	36.44	31.83	4.21	-732.84	1,210.91	2,251.91	2,232.80	19.11	117.811	
7,400.00	6,848.03	4,875.01	4,606.49	38.40	31.83	4.21	-732.84	1,210.91	2,262.20	2,242.69	19.51	115.932	
7,500.00	6,848.05	4,875.01	4,606.49	40.49	31.83	4.21	-732.84	1,210.91	2,276.84	2,256.69	20.15	112.989	
7,600.00	6,848.08	4,875.01	4,606.49	42.70	31.83	4.21	-732.84	1,210.91	2,295.75	2,274.76	20.99	109.382	
7,700.00	6,848.10	4,875.01	4,606.49	45.01	31.83	4.21	-732.84	1,210.91	2,318.81	2,296.83	21.98	105.490	
7,800.00	6,848.12	4,875.01	4,606.49	47.40	31.83	4.21	-732.84	1,210.91	2,345.92	2,322.83	23.09	101.608	
7,900.00	6,848.15	4,875.01	4,606.49	49.86	31.83	4.21	-732.84	1,210.91	2,376.93	2,352.66	24.27	97.934	
8,000.00	6,848.17	4,875.01	4,606.49	52.39	31.83	4.21	-732.84	1,210.91	2,411.69	2,386.19	25.50	94.582	
8,100.00	6,848.20	4,875.01	4,606.49	54.96	31.83	4.21	-732.84	1,210.91	2,450.04	2,423.30	26.75	91.606	
8,200.00	6,848.22	4,875.01	4,606.49	57.58	31.83	4.21	-732.84	1,210.91	2,491.82	2,463.83	27.99	89.019	
8,300.00	6,848.25	4,875.01	4,606.49	60.24	31.83	4.21	-732.84	1,210.91	2,536.85	2,507.63	29.22	86.812	
8,400.00	6,848.27	4,875.01	4,606.49	62.94	31.83	4.21	-732.84	1,210.91	2,584.97	2,554.54	30.43	84.962	
8,500.00	6,848.29	4,875.01	4,606.49	65.66	31.83	4.21	-732.84	1,210.91	2,636.00	2,604.41	31.59	83.440	
8,600.00	6,848.32	4,875.01	4,606.49	68.42	31.83	4.21	-732.84	1,210.91	2,689.79	2,657.07	32.72	82.215	
8,700.00	6,848.34	4,875.01	4,606.49	71.19	31.83	4.21	-732.84	1,210.91	2,746.16	2,712.37	33.80	81.258	
8,800.00	6,848.37	4,875.01	4,606.49	73.99	31.83	4.21	-732.84	1,210.91	2,804.97	2,770.14	34.83	80.541	
8,900.00	6,848.39	4,875.01	4,606.49	76.80	31.83	4.21	-732.84	1,210.91	2,866.06	2,830.25	35.81	80.038	
9,000.00	6,848.42	4,875.01	4,606.49	79.63	31.83	4.21	-732.84	1,210.91	2,929.29	2,892.55	36.74	79.725	
9,100.00	6,848.44	4,875.01	4,606.49	82.47	31.83	4.21	-732.84	1,210.91	2,994.53	2,956.90	37.63	79.584	
9,200.00	6,848.46	4,875.01	4,606.49	85.33	31.83	4.21	-732.84	1,210.91	3,061.64	3,023.18	38.47	79.594	
9,300.00	6,848.49	4,875.01	4,606.49	88.20	31.83	4.21	-732.84	1,210.91	3,130.51	3,091.25	39.26	79.740	
9,400.00	6,848.51	4,875.01	4,606.49	91.08	31.83	4.21	-732.84	1,210.91	3,201.02	3,161.02	40.01	80.009	
9,500.00	6,848.54	4,875.01	4,606.49	93.97	31.83	4.21	-732.84	1,210.91	3,273.07	3,232.36	40.72	80.386	
9,600.00	6,848.56	4,875.01	4,606.49	96.87	31.83	4.21	-732.84	1,210.91	3,346.56	3,305.17	41.39	80.862	
9,700.00	6,848.58	4,875.01	4,606.49	99.77	31.83	4.21	-732.84	1,210.91	3,421.39	3,379.37	42.02	81.426	
9,800.00	6,848.61	4,875.01	4,606.49	102.69	31.83	4.21	-732.84	1,210.91	3,497.48	3,454.86	42.62	82.070	
9,900.00	6,848.63	4,875.01	4,606.49	105.61	31.83	4.21	-732.84	1,210.91	3,574.75	3,531.56	43.18	82.786	
10,000.00	6,848.66	4,875.01	4,606.49	108.53	31.83	4.21	-732.84	1,210.91	3,653.12	3,609.40	43.71	83.568	
10,100.00	6,848.68	4,875.01	4,606.49	111.46	31.83	4.21	-732.84	1,210.91	3,732.52	3,688.30	44.22	84.409	
10,200.00	6,848.71	4,875.01	4,606.49	114.40	31.83	4.21	-732.84	1,210.91	3,812.89	3,768.20	44.70	85.304	
10,300.00	6,848.73	4,875.01	4,606.49	117.34	31.83	4.21	-732.84	1,210.91	3,894.18	3,849.02	45.15	86.248	
10,400.00	6,848.75	4,875.01	4,606.49	120.29	31.83	4.21	-732.84	1,210.91	3,976.31	3,930.73	45.58	87.236	
10,500.00	6,848.78	4,875.01	4,606.49	123.24	31.83	4.21	-732.84	1,210.91	4,059.25	4,013.26	45.99	88.266	
10,600.00	6,848.80	4,875.01	4,606.49	126.20	31.83	4.21	-732.84	1,210.91	4,142.94	4,096.56	46.38	89.332	
10,700.00	6,848.83	4,875.01	4,606.49	129.16	31.83	4.21	-732.84	1,210.91	4,227.34	4,180.59	46.75	90.433	
10,800.00	6,848.85	4,875.01	4,606.49	132.12	31.83	4.21	-732.84	1,210.91	4,312.41	4,265.31	47.10	91.566	
10,900.00	6,848.88	4,875.01	4,606.49	135.08	31.83	4.21	-732.84	1,210.91	4,398.10	4,350.67	47.43	92.726	
11,000.00	6,848.90	4,875.01	4,606.49	138.05	31.83	4.21	-732.84	1,210.91	4,484.39	4,436.64	47.75	93.914	
11,100.00	6,848.92	4,875.01	4,606.49	141.02	31.83	4.21	-732.84	1,210.91	4,571.24	4,523.18	48.05	95.125	
11,200.00	6,848.95	4,875.01	4,606.49	144.00	31.83	4.21	-732.84	1,210.91	4,658.61	4,610.26	48.35	96.359	
11,300.00	6,848.97	4,875.01	4,606.49	146.97	31.83	4.21	-732.84	1,210.91	4,746.48	4,697.86	48.63	97.613	
11,400.00	6,849.00	4,875.01	4,606.49	149.95	31.83	4.21	-732.84	1,210.91	4,834.83	4,785.93	48.89	98.886	
11,500.00	6,849.02	4,875.01	4,606.49	152.93	31.83	4.21	-732.84	1,210.91	4,923.62	4,874.47	49.15	100.176	
11,600.00	6,849.04	4,875.01	4,606.49	155.91	31.83	4.21	-732.84	1,210.91	5,012.83	4,963.43	49.40	101.482	
11,700.00	6,849.07	4,875.01	4,606.49	158.90	31.83	4.21	-732.84	1,210.91	5,102.44	5,052.81	49.63	102.803	
11,800.00	6,849.09	4,875.01	4,606.49	161.88	31.83	4.21	-732.84	1,210.91	5,192.43	5,142.57	49.86	104.137	
11,900.00	6,849.12	4,875.01	4,606.49	164.87	31.83	4.21	-732.84	1,210.91	5,282.78	5,232.70	50.08	105.484	
12,000.00	6,849.14	4,875.01	4,606.49	167.86	31.83	4.21	-732.84	1,210.91	5,373.48	5,323.18	50.29	106.842	
12,100.00	6,849.17	4,875.01	4,606.49	170.85	31.83	4.21	-732.84	1,210.91	5,464.49	5,414.00	50.50	108.210	
12,200.00	6,849.19	4,875.01	4,606.49	173.84	31.83	4.21	-732.84	1,210.91	5,555.82	5,505.12	50.70	109.588	
12,300.00	6,849.21	4,875.01	4,606.49	176.84	31.83	4.21	-732.84	1,210.91	5,647.44	5,596.55	50.89	110.974	

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison 13N - OH - As Drilled												Offset Site Error:	0.00 ft
Survey Program: 266-MWD SDI												Offset Well Error:	15.00 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (ft)	Separation Factor	Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)			
12,400.00	6,849.24	4,875.01	4,606.49	179.83	31.83	4.21	-732.84	1,210.91	5,739.34	5,688.27	51.08	112.369	
12,500.00	6,849.26	4,875.01	4,606.49	182.83	31.83	4.21	-732.84	1,210.91	5,831.51	5,780.25	51.26	113.771	
12,600.00	6,849.29	4,875.01	4,606.49	185.82	31.83	4.21	-732.84	1,210.91	5,923.93	5,872.50	51.43	115.179	
12,700.00	6,849.31	4,875.01	4,606.49	188.82	31.83	4.21	-732.84	1,210.91	6,016.59	5,964.99	51.60	116.594	
12,800.00	6,849.34	4,875.01	4,606.49	191.82	31.83	4.21	-732.84	1,210.91	6,109.49	6,057.72	51.77	118.014	
12,900.00	6,849.36	4,875.01	4,606.49	194.82	31.83	4.21	-732.84	1,210.91	6,202.60	6,150.67	51.93	119.439	
13,000.00	6,849.38	4,875.01	4,606.49	197.82	31.83	4.21	-732.84	1,210.91	6,295.93	6,243.84	52.09	120.868	
13,100.00	6,849.41	4,875.01	4,606.49	200.83	31.83	4.21	-732.84	1,210.91	6,389.46	6,337.22	52.24	122.302	
13,200.00	6,849.43	4,875.01	4,606.49	203.83	31.83	4.21	-732.84	1,210.91	6,483.18	6,430.79	52.39	123.739	
13,300.00	6,849.46	4,875.01	4,606.49	206.83	31.83	4.21	-732.84	1,210.91	6,577.09	6,524.55	52.54	125.179	
13,400.00	6,849.48	4,875.01	4,606.49	209.84	31.83	4.21	-732.84	1,210.91	6,671.17	6,618.49	52.69	126.621	
13,500.00	6,849.50	4,875.01	4,606.49	212.84	31.83	4.21	-732.84	1,210.91	6,765.43	6,712.60	52.83	128.066	
13,600.00	6,849.53	4,875.01	4,606.49	215.85	31.83	4.21	-732.84	1,210.91	6,859.84	6,806.88	52.97	129.513	
13,700.00	6,849.55	4,875.01	4,606.49	218.86	31.83	4.21	-732.84	1,210.91	6,954.42	6,901.31	53.10	130.962	
13,800.00	6,849.58	4,875.01	4,606.49	221.87	31.83	4.21	-732.84	1,210.91	7,049.14	6,995.90	53.24	132.412	
13,900.00	6,849.60	4,875.01	4,606.49	224.87	31.83	4.21	-732.84	1,210.91	7,144.01	7,090.64	53.37	133.863	
14,000.00	6,849.63	4,875.01	4,606.49	227.88	31.83	4.21	-732.84	1,210.91	7,239.01	7,185.51	53.50	135.315	
14,100.00	6,849.65	4,875.01	4,606.49	230.89	31.83	4.21	-732.84	1,210.91	7,334.15	7,280.52	53.63	136.767	
14,200.00	6,849.67	4,875.01	4,606.49	233.90	31.83	4.21	-732.84	1,210.91	7,429.41	7,375.66	53.75	138.220	
14,300.00	6,849.70	4,875.01	4,606.49	236.92	31.83	4.21	-732.84	1,210.91	7,524.80	7,470.92	53.87	139.672	
14,400.00	6,849.72	4,875.01	4,606.49	239.93	31.83	4.21	-732.84	1,210.91	7,620.31	7,566.31	54.00	141.124	
14,500.00	6,849.75	4,875.01	4,606.49	242.94	31.83	4.21	-732.84	1,210.91	7,715.93	7,661.81	54.12	142.576	
14,600.00	6,849.77	4,875.01	4,606.49	245.95	31.83	4.21	-732.84	1,210.91	7,811.66	7,757.42	54.24	144.028	
14,700.00	6,849.80	4,875.01	4,606.49	248.96	31.83	4.21	-732.84	1,210.91	7,907.49	7,853.14	54.36	145.478	
14,800.00	6,849.82	4,875.01	4,606.49	251.98	31.83	4.21	-732.84	1,210.91	8,003.43	7,948.96	54.47	146.928	
14,900.00	6,849.84	4,875.01	4,606.49	254.99	31.83	4.21	-732.84	1,210.91	8,099.46	8,044.88	54.59	148.376	
15,000.00	6,849.87	4,875.01	4,606.49	258.01	31.83	4.21	-732.84	1,210.91	8,195.59	8,140.89	54.70	149.823	
15,100.00	6,849.89	4,875.01	4,606.49	261.02	31.83	4.21	-732.84	1,210.91	8,291.82	8,237.00	54.82	151.268	
15,200.00	6,849.92	4,875.01	4,606.49	264.04	31.83	4.21	-732.84	1,210.91	8,388.13	8,333.20	54.93	152.712	
15,300.00	6,849.94	4,875.01	4,606.49	267.05	31.83	4.21	-732.84	1,210.91	8,484.52	8,429.48	55.04	154.154	
15,400.00	6,849.97	4,875.01	4,606.49	270.07	31.83	4.21	-732.84	1,210.91	8,581.00	8,525.85	55.15	155.594	
15,500.00	6,849.99	4,875.01	4,606.49	273.08	31.83	4.21	-732.84	1,210.91	8,677.56	8,622.30	55.26	157.032	
15,600.00	6,850.01	4,875.01	4,606.49	276.10	31.83	4.21	-732.84	1,210.91	8,774.19	8,718.82	55.37	158.468	
15,700.00	6,850.04	4,875.01	4,606.49	279.12	31.83	4.21	-732.84	1,210.91	8,870.90	8,815.43	55.48	159.901	
15,800.00	6,850.06	4,875.01	4,606.49	282.14	31.83	4.21	-732.84	1,210.91	8,967.68	8,912.10	55.59	161.332	
15,900.00	6,850.09	4,875.01	4,606.49	285.15	31.83	4.21	-732.84	1,210.91	9,064.54	9,008.84	55.69	162.761	
16,000.00	6,850.11	4,875.01	4,606.49	288.17	31.83	4.21	-732.84	1,210.91	9,161.46	9,105.66	55.80	164.186	
16,100.00	6,850.13	4,875.01	4,606.49	291.19	31.83	4.21	-732.84	1,210.91	9,258.44	9,202.53	55.91	165.609	
16,200.00	6,850.16	4,875.01	4,606.49	294.21	31.83	4.21	-732.84	1,210.91	9,355.49	9,299.48	56.01	167.030	
16,300.00	6,850.18	4,875.01	4,606.49	297.23	31.83	4.21	-732.84	1,210.91	9,452.60	9,396.48	56.12	168.447	
16,400.00	6,850.21	4,875.01	4,606.49	300.25	31.83	4.21	-732.84	1,210.91	9,549.77	9,493.55	56.22	169.861	
16,500.00	6,850.23	4,875.01	4,606.49	303.27	31.83	4.21	-732.84	1,210.91	9,646.99	9,590.67	56.33	171.272	
16,600.00	6,850.26	4,875.01	4,606.49	306.28	31.83	4.21	-732.84	1,210.91	9,744.28	9,687.85	56.43	172.680	
16,700.00	6,850.28	4,875.01	4,606.49	309.30	31.83	4.21	-732.84	1,210.91	9,841.62	9,785.08	56.53	174.085	
16,800.00	6,850.30	4,875.01	4,606.49	312.32	31.83	4.21	-732.84	1,210.91	9,939.01	9,882.37	56.64	175.486	
16,900.00	6,850.33	4,875.01	4,606.49	315.35	31.83	4.21	-732.84	1,210.91	10,036.45	9,979.71	56.74	176.884	
17,000.00	6,850.35	4,875.01	4,606.49	318.37	31.83	4.21	-732.84	1,210.91	10,133.94	10,077.10	56.84	178.278	
17,100.00	6,850.38	4,875.01	4,606.49	321.39	31.83	4.21	-732.84	1,210.91	10,231.48	10,174.54	56.95	179.669	
17,200.00	6,850.40	4,875.01	4,606.49	324.41	31.83	4.21	-732.84	1,210.91	10,329.07	10,272.02	57.05	181.056	
17,300.00	6,850.43	4,875.01	4,606.49	327.43	31.83	4.21	-732.84	1,210.91	10,426.70	10,369.55	57.15	182.440	
17,400.00	6,850.45	4,875.01	4,606.49	330.45	31.83	4.21	-732.84	1,210.91	10,524.38	10,467.13	57.25	183.820	
17,500.00	6,850.47	4,875.01	4,606.49	333.47	31.83	4.21	-732.84	1,210.91	10,622.10	10,564.74	57.36	185.196	

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison 13N - OH - As Drilled													Offset Site Error: 0.00 ft	
Survey Program: 266-MWD SDI									Rule Assigned:				Offset Well Error: 15.00 ft	
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (ft)	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
17,600.00	6,850.50	4,875.01	4,606.49	336.49	31.83	4.21	-732.84	1,210.91	10,719.86	10,662.40	57.46	186.568		
17,700.00	6,850.52	4,875.01	4,606.49	339.52	31.83	4.21	-732.84	1,210.91	10,817.67	10,760.11	57.56	187.937		
17,800.00	6,850.55	4,875.01	4,606.49	342.54	31.83	4.21	-732.84	1,210.91	10,915.51	10,857.85	57.66	189.301		
17,900.00	6,850.57	4,875.01	4,606.49	345.56	31.83	4.21	-732.84	1,210.91	11,013.39	10,955.63	57.76	190.662		
18,000.00	6,850.59	4,875.01	4,606.49	348.58	31.83	4.21	-732.84	1,210.91	11,111.31	11,053.45	57.87	192.018		
18,100.00	6,850.62	4,875.01	4,606.49	351.61	31.83	4.21	-732.84	1,210.91	11,209.27	11,151.30	57.97	193.371		
18,200.00	6,850.64	4,875.01	4,606.49	354.63	31.83	4.21	-732.84	1,210.91	11,307.26	11,249.19	58.07	194.719		
18,300.00	6,850.67	4,875.01	4,606.49	357.65	31.83	4.21	-732.84	1,210.91	11,405.29	11,347.12	58.17	196.064		
18,400.00	6,850.69	4,875.01	4,606.49	360.67	31.83	4.21	-732.84	1,210.91	11,503.35	11,445.08	58.27	197.404		
18,500.00	6,850.72	4,875.01	4,606.49	363.70	31.83	4.21	-732.84	1,210.91	11,601.44	11,543.07	58.37	198.740		
18,600.00	6,850.74	4,875.01	4,606.49	366.72	31.83	4.21	-732.84	1,210.91	11,699.57	11,641.09	58.48	200.072		
18,700.00	6,850.76	4,875.01	4,606.49	369.75	31.83	4.21	-732.84	1,210.91	11,797.73	11,739.15	58.58	201.399		
18,800.00	6,850.79	4,875.01	4,606.49	372.77	31.83	4.21	-732.84	1,210.91	11,895.92	11,837.24	58.68	202.722		
18,900.00	6,850.81	4,875.01	4,606.49	375.79	31.83	4.21	-732.84	1,210.91	11,994.14	11,935.35	58.78	204.041		
19,000.00	6,850.84	4,875.01	4,606.49	378.82	31.83	4.21	-732.84	1,210.91	12,092.38	12,033.50	58.88	205.356		
19,100.00	6,850.86	4,875.01	4,606.49	381.84	31.83	4.21	-732.84	1,210.91	12,190.66	12,131.67	58.99	206.666		
19,200.00	6,850.89	4,875.01	4,606.49	384.87	31.83	4.21	-732.84	1,210.91	12,288.97	12,229.88	59.09	207.972		
19,300.00	6,850.91	4,875.01	4,606.49	387.89	31.83	4.21	-732.84	1,210.91	12,387.30	12,328.10	59.19	209.274		
19,400.00	6,850.93	4,875.01	4,606.49	390.91	31.83	4.21	-732.84	1,210.91	12,485.65	12,426.36	59.29	210.571		
19,500.00	6,850.96	4,875.01	4,606.49	393.94	31.83	4.21	-732.84	1,210.91	12,584.04	12,524.64	59.40	211.864		
19,600.00	6,850.98	4,875.01	4,606.49	396.96	31.83	4.21	-732.84	1,210.91	12,682.45	12,622.95	59.50	213.152		
19,673.90	6,851.00	4,875.01	4,606.49	399.20	31.83	4.20	-732.84	1,210.91	12,755.19	12,695.61	59.58	214.102		
19,700.00	6,851.01	4,875.01	4,606.49	399.99	31.83	4.20	-732.84	1,210.91	12,780.88	12,721.28	59.60	214.436		
19,773.90	6,851.02	4,875.01	4,606.49	402.22	31.83	4.20	-732.84	1,210.91	12,853.64	12,793.96	59.68	215.382		



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison 13P - OH - As Drilled												Offset Site Error:	0.00 ft
Survey Program: 357-MWD SDI												Offset Well Error:	0.00 ft
Reference												Rule Assigned:	
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Distance		Minimum Separation	Separation Factor	Warning
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	(ft)		
0.00	0.00	0.01	0.01	0.00	0.00	-90.41	-0.37	-50.82	50.82				
100.00	100.00	100.15	100.15	0.30	0.11	-90.52	-0.46	-50.68	50.68	50.27	0.41	123.393	
200.00	200.00	200.29	200.29	0.66	0.23	-90.84	-0.73	-50.26	50.27	49.38	0.88	56.982	
300.00	300.00	300.42	300.42	1.01	0.34	-91.38	-1.19	-49.56	49.58	48.23	1.35	36.629	
400.00	400.00	400.25	400.24	1.37	0.49	-92.12	-1.81	-48.73	48.76	46.90	1.86	26.183	
500.00	500.00	501.36	501.33	1.73	0.70	-93.24	-2.69	-47.42	47.51	45.08	2.43	19.540	
600.00	599.98	602.67	602.45	2.08	0.94	138.41	-6.35	-42.71	44.53	41.52	3.01	14.793	
700.00	699.84	703.46	702.77	2.42	1.21	132.93	-13.14	-35.67	42.51	38.91	3.60	11.800	
800.00	799.45	803.86	802.27	2.77	1.50	126.76	-21.99	-25.66	40.80	36.57	4.23	9.637	
828.25	827.53	832.10	830.25	2.87	1.58	125.58	-24.51	-22.76	40.71	36.30	4.41	9.229 CC	
900.00	898.70	904.00	901.47	3.13	1.78	123.99	-30.91	-15.29	41.15	36.28	4.87	8.454	
963.97	961.95	968.27	965.02	3.37	1.99	123.34	-37.16	-8.00	42.02	36.72	5.30	7.922	
1,000.00	997.50	1,004.56	1,000.82	3.51	2.12	122.77	-41.06	-3.47	42.50	36.93	5.56	7.639	
1,100.00	1,096.19	1,104.77	1,099.19	3.90	2.51	118.03	-53.64	10.84	42.96	36.62	6.34	6.778	
1,200.00	1,194.89	1,205.11	1,196.86	4.30	2.95	108.17	-69.24	27.68	43.31	36.09	7.22	5.997 ES	
1,300.00	1,293.58	1,305.23	1,293.66	4.70	3.43	95.26	-86.11	46.88	44.26	36.13	8.13	5.441	
1,400.00	1,392.27	1,405.13	1,390.05	5.11	3.89	82.25	-102.52	67.37	46.34	37.40	8.94	5.185 SF	
1,500.00	1,490.96	1,503.68	1,484.99	5.52	4.37	70.40	-118.98	88.05	50.69	41.07	9.63	5.266	
1,600.00	1,589.65	1,603.30	1,580.94	5.94	4.84	61.47	-136.88	107.99	58.22	47.98	10.24	5.684	
1,700.00	1,688.34	1,703.70	1,678.03	6.36	5.30	55.04	-153.16	127.66	65.04	54.20	10.85	5.996	
1,800.00	1,787.03	1,802.71	1,773.80	6.78	5.78	49.99	-169.17	147.01	72.47	61.03	11.44	6.334	
1,900.00	1,885.73	1,902.71	1,870.59	7.20	6.24	46.05	-185.31	166.28	80.26	68.22	12.04	6.664	
2,000.00	1,984.42	2,002.44	1,967.30	7.62	6.70	43.49	-201.50	184.50	88.24	75.57	12.67	6.966	
2,100.00	2,083.11	2,101.13	2,062.97	8.04	7.18	41.53	-217.83	202.35	96.62	83.33	13.29	7.269	
2,200.00	2,181.80	2,201.64	2,160.33	8.46	7.66	39.66	-234.54	220.91	105.29	91.35	13.94	7.554	
2,300.00	2,280.49	2,299.80	2,255.39	8.89	8.14	38.15	-251.04	238.99	114.21	99.65	14.56	7.843	
2,400.00	2,379.18	2,399.46	2,351.73	9.31	8.64	36.74	-268.29	257.75	123.82	108.62	15.20	8.144	
2,500.00	2,477.87	2,499.82	2,448.86	9.74	9.11	35.42	-285.06	276.66	132.92	117.08	15.84	8.391	
2,600.00	2,576.56	2,602.00	2,548.10	10.16	9.57	34.51	-301.17	294.93	140.83	124.33	16.51	8.532	
2,700.00	2,675.26	2,701.34	2,644.82	10.59	10.00	33.88	-316.11	311.94	147.80	130.65	17.15	8.617	
2,800.00	2,773.95	2,799.90	2,740.60	11.02	10.46	33.50	-332.15	328.75	155.91	138.10	17.81	8.755	
2,900.00	2,872.64	2,904.36	2,842.44	11.44	10.91	33.37	-348.23	345.53	162.83	144.31	18.52	8.790	
3,000.00	2,971.33	3,011.89	2,948.20	11.87	11.31	33.69	-361.12	359.99	165.52	146.27	19.25	8.599	
3,100.00	3,070.02	3,116.13	3,051.26	12.30	11.65	34.23	-370.79	372.16	165.03	145.09	19.95	8.274	
3,200.00	3,168.71	3,222.83	3,157.38	12.73	11.92	35.95	-378.25	380.27	160.98	140.29	20.69	7.780	
3,300.00	3,267.40	3,316.01	3,250.40	13.16	12.10	38.42	-382.11	383.99	153.52	132.00	21.52	7.133	
3,304.45	3,271.80	3,316.01	3,250.40	13.17	12.10	38.42	-382.11	383.99	153.52	131.97	21.54	7.126	
3,400.00	3,366.10	3,316.01	3,250.40	13.58	12.10	38.42	-382.11	383.99	181.90	162.95	18.95	9.599	
3,500.00	3,464.79	3,316.01	3,250.40	14.01	12.10	38.42	-382.11	383.99	250.21	235.26	14.95	16.739	
3,600.00	3,563.48	3,316.01	3,250.40	14.44	12.10	38.42	-382.11	383.99	334.85	322.41	12.44	26.914	
3,700.00	3,662.17	3,316.01	3,250.40	14.87	12.10	38.42	-382.11	383.99	426.20	415.17	11.03	38.639	
3,800.00	3,760.86	3,316.01	3,250.40	15.30	12.10	38.42	-382.11	383.99	520.73	510.51	10.22	50.930	
3,900.00	3,859.55	3,316.01	3,250.40	15.73	12.10	38.42	-382.11	383.99	616.99	607.24	9.76	63.240	
4,000.00	3,958.24	3,316.01	3,250.40	16.16	12.10	38.42	-382.11	383.99	714.28	704.79	9.49	75.290	
4,100.00	4,056.94	3,316.01	3,250.40	16.59	12.10	38.42	-382.11	383.99	812.23	802.89	9.34	86.953	
4,200.00	4,155.63	3,316.01	3,250.40	17.02	12.10	38.42	-382.11	383.99	910.62	901.35	9.28	98.177	
4,300.00	4,254.32	3,316.01	3,250.40	17.45	12.10	38.42	-382.11	383.99	1,009.33	1,000.07	9.26	108.946	
4,400.00	4,353.01	3,316.01	3,250.40	17.88	12.10	38.42	-382.11	383.99	1,108.27	1,098.98	9.29	119.265	
4,500.00	4,451.70	3,316.01	3,250.40	18.30	12.10	38.42	-382.11	383.99	1,207.39	1,198.04	9.35	129.145	
4,600.00	4,550.39	3,316.01	3,250.40	18.73	12.10	38.42	-382.11	383.99	1,306.64	1,297.21	9.43	138.601	
4,700.00	4,649.08	3,316.01	3,250.40	19.16	12.10	38.42	-382.11	383.99	1,406.00	1,396.47	9.52	147.651	
4,800.00	4,747.77	3,316.01	3,250.40	19.59	12.10	38.42	-382.11	383.99	1,505.44	1,495.81	9.63	156.310	

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison 13P - OH - As Drilled													Offset Site Error:	0.00 ft
Survey Program: 357-MWD SDI													Offset Well Error:	0.00 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Distance Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
4,900.00	4,846.47	3,316.01	3,250.40	20.02	12.10	38.42	-382.11	383.99	1,604.95	1,595.20	9.75	164.596		
5,000.00	4,945.16	3,316.01	3,250.40	20.45	12.10	38.42	-382.11	383.99	1,704.52	1,694.64	9.88	172.523		
5,100.00	5,043.85	3,316.01	3,250.40	20.88	12.10	38.42	-382.11	383.99	1,804.13	1,794.12	10.02	180.107		
5,200.00	5,142.54	3,316.01	3,250.40	21.31	12.10	38.42	-382.11	383.99	1,903.79	1,893.63	10.16	187.362		
5,300.00	5,241.23	3,316.01	3,250.40	21.74	12.10	38.42	-382.11	383.99	2,003.48	1,993.17	10.31	194.300		
5,400.00	5,339.92	3,316.01	3,250.40	22.17	12.10	38.42	-382.11	383.99	2,103.20	2,092.73	10.47	200.934		
5,500.00	5,438.61	3,316.01	3,250.40	22.61	12.10	38.42	-382.11	383.99	2,202.95	2,192.32	10.63	207.277		
5,600.00	5,537.31	3,316.01	3,250.40	23.04	12.10	38.42	-382.11	383.99	2,302.71	2,291.92	10.79	213.339		
5,700.00	5,636.00	3,316.01	3,250.40	23.47	12.10	38.42	-382.11	383.99	2,402.50	2,391.54	10.96	219.131		
5,800.00	5,734.69	3,316.01	3,250.40	23.90	12.10	38.42	-382.11	383.99	2,502.30	2,491.17	11.14	224.663		
5,900.00	5,833.38	3,316.01	3,250.40	24.33	12.10	38.42	-382.11	383.99	2,602.12	2,590.81	11.32	229.946		
6,000.00	5,932.07	3,316.01	3,250.40	24.76	12.10	38.42	-382.11	383.99	2,701.96	2,690.46	11.50	234.989		
6,100.00	6,030.76	3,316.01	3,250.40	25.19	12.10	38.42	-382.11	383.99	2,801.80	2,790.12	11.68	239.800		
6,200.00	6,129.45	3,316.01	3,250.40	25.62	12.10	38.42	-382.11	383.99	2,901.66	2,889.78	11.87	244.389		
6,300.00	6,228.15	3,316.01	3,250.40	26.05	12.10	38.42	-382.11	383.99	3,001.52	2,989.45	12.07	248.763		
6,370.81	6,298.03	3,316.01	3,250.40	26.35	12.10	38.42	-382.11	383.99	3,072.24	3,060.03	12.20	251.736		
6,400.00	6,326.74	3,316.01	3,250.40	26.48	12.10	10.86	-382.11	383.99	3,101.37	3,089.11	12.26	252.939		
6,450.00	6,375.33	3,316.01	3,250.40	26.73	12.10	-1.19	-382.11	383.99	3,151.07	3,138.71	12.36	254.980		
6,500.00	6,422.93	3,316.01	3,250.40	26.99	12.10	-3.49	-382.11	383.99	3,200.24	3,187.79	12.45	257.001		
6,550.00	6,469.25	3,316.01	3,250.40	27.29	12.10	-3.95	-382.11	383.99	3,248.63	3,236.08	12.54	258.982		
6,600.00	6,513.99	3,316.01	3,250.40	27.61	12.10	-3.94	-382.11	383.99	3,295.97	3,283.33	12.63	260.896		
6,650.00	6,556.88	3,316.01	3,250.40	27.96	12.10	-3.80	-382.11	383.99	3,342.02	3,329.30	12.72	262.718		
6,700.00	6,597.66	3,316.01	3,250.40	28.34	12.10	-3.63	-382.11	383.99	3,386.56	3,373.75	12.81	264.414		
6,750.00	6,636.07	3,316.01	3,250.40	28.76	12.10	-3.47	-382.11	383.99	3,429.37	3,416.48	12.89	265.950		
6,800.00	6,671.88	3,316.01	3,250.40	29.21	12.10	-3.33	-382.11	383.99	3,470.27	3,457.28	12.98	267.286		
6,850.00	6,704.87	3,316.01	3,250.40	29.71	12.10	-3.21	-382.11	383.99	3,509.06	3,495.99	13.07	268.380		
6,900.00	6,734.84	3,316.01	3,250.40	30.25	12.10	-3.12	-382.11	383.99	3,545.59	3,532.42	13.17	269.188		
6,950.00	6,761.59	3,316.01	3,250.40	30.85	12.10	-3.04	-382.11	383.99	3,579.70	3,566.42	13.27	269.664		
7,000.00	6,784.97	3,316.01	3,250.40	31.50	12.10	-2.98	-382.11	383.99	3,611.25	3,597.86	13.39	269.764		
7,050.00	6,804.83	3,316.01	3,250.40	32.20	12.10	-2.94	-382.11	383.99	3,640.12	3,626.61	13.51	269.447		
7,100.00	6,821.05	3,316.01	3,250.40	32.96	12.10	-2.92	-382.11	383.99	3,666.19	3,652.55	13.65	268.679		
7,150.00	6,833.53	3,316.01	3,250.40	33.77	12.10	-2.92	-382.11	383.99	3,689.37	3,675.57	13.80	267.432		
7,200.00	6,842.18	3,316.01	3,250.40	34.62	12.10	-2.93	-382.11	383.99	3,709.56	3,695.60	13.96	265.689		
7,250.00	6,846.97	3,316.01	3,250.40	35.52	12.10	-2.96	-382.11	383.99	3,726.69	3,712.55	14.15	263.445		
7,286.15	6,848.00	3,316.01	3,250.40	36.18	12.10	-2.99	-382.11	383.99	3,737.14	3,722.85	14.29	261.539		
7,300.00	6,848.00	3,316.01	3,250.40	36.44	12.10	-2.99	-382.11	383.99	3,740.85	3,726.51	14.35	260.760		
7,400.00	6,848.03	3,316.01	3,250.40	38.40	12.10	-2.99	-382.11	383.99	3,769.05	3,754.23	14.81	254.438		
7,500.00	6,848.05	3,316.01	3,250.40	40.49	12.10	-2.99	-382.11	383.99	3,799.67	3,784.34	15.33	247.863		
7,600.00	6,848.08	3,316.01	3,250.40	42.70	12.10	-2.99	-382.11	383.99	3,832.65	3,816.77	15.89	241.263		
7,700.00	6,848.10	3,316.01	3,250.40	45.01	12.10	-2.99	-382.11	383.99	3,867.94	3,851.47	16.47	234.805		
7,800.00	6,848.12	3,316.01	3,250.40	47.40	12.10	-2.99	-382.11	383.99	3,905.47	3,888.39	17.08	228.611		
7,900.00	6,848.15	3,316.01	3,250.40	49.86	12.10	-2.99	-382.11	383.99	3,945.18	3,927.47	17.71	222.758		
8,000.00	6,848.17	3,316.01	3,250.40	52.39	12.10	-2.99	-382.11	383.99	3,987.01	3,968.66	18.35	217.293		
8,100.00	6,848.20	3,316.01	3,250.40	54.96	12.10	-2.99	-382.11	383.99	4,030.88	4,011.89	18.99	212.239		
8,200.00	6,848.22	3,316.01	3,250.40	57.58	12.10	-2.99	-382.11	383.99	4,076.73	4,057.09	19.64	207.599		
8,300.00	6,848.25	3,316.01	3,250.40	60.24	12.10	-2.99	-382.11	383.99	4,124.50	4,104.22	20.28	203.369		
8,400.00	6,848.27	3,316.01	3,250.40	62.94	12.10	-2.99	-382.11	383.99	4,174.12	4,153.20	20.92	199.533		
8,500.00	6,848.29	3,316.01	3,250.40	65.66	12.10	-2.99	-382.11	383.99	4,225.52	4,203.97	21.55	196.073		
8,600.00	6,848.32	3,316.01	3,250.40	68.42	12.10	-2.99	-382.11	383.99	4,278.64	4,256.47	22.17	192.968		
8,700.00	6,848.34	3,316.01	3,250.40	71.19	12.10	-2.99	-382.11	383.99	4,333.42	4,310.63	22.78	190.194		
8,800.00	6,848.37	3,316.01	3,250.40	73.99	12.10	-2.99	-382.11	383.99	4,389.79	4,366.41	23.38	187.729		
8,900.00	6,848.39	3,316.01	3,250.40	76.80	12.10	-2.99	-382.11	383.99	4,447.70	4,423.73	23.97	185.551		

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison 13P - OH - As Drilled													Offset Site Error:	0.00 ft
Survey Program:		357-MWD SDI						Rule Assigned:				Offset Well Error:	0.00 ft	
Reference	Offset	Semi Major Axis		Offset Wellbore Centre		Distance				Warning				
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
9,000.00	6,848.42	3,316.01	3,250.40	79.63	12.10	-2.99	-382.11	383.99	4,507.08	4,482.53	24.54	183.639		
9,100.00	6,848.44	3,316.01	3,250.40	82.47	12.10	-2.99	-382.11	383.99	4,567.88	4,542.78	25.10	181.972		
9,200.00	6,848.46	3,316.01	3,250.40	85.33	12.10	-2.99	-382.11	383.99	4,630.04	4,604.39	25.65	180.532		
9,300.00	6,848.49	3,316.01	3,250.40	88.20	12.10	-2.99	-382.11	383.99	4,693.51	4,667.33	26.18	179.302		
9,400.00	6,848.51	3,316.01	3,250.40	91.08	12.10	-2.99	-382.11	383.99	4,758.23	4,731.54	26.69	178.265		
9,500.00	6,848.54	3,316.01	3,250.40	93.97	12.10	-2.99	-382.11	383.99	4,824.16	4,796.97	27.19	177.406		
9,600.00	6,848.56	3,316.01	3,250.40	96.87	12.10	-2.99	-382.11	383.99	4,891.24	4,863.56	27.68	176.713		
9,700.00	6,848.58	3,316.01	3,250.40	99.77	12.10	-2.99	-382.11	383.99	4,959.44	4,931.29	28.15	176.172		
9,800.00	6,848.61	3,316.01	3,250.40	102.69	12.10	-2.99	-382.11	383.99	5,028.69	5,000.09	28.61	175.772		
9,900.00	6,848.63	3,316.01	3,250.40	105.61	12.10	-2.99	-382.11	383.99	5,098.97	5,069.92	29.05	175.502		
10,000.00	6,848.66	3,316.01	3,250.40	108.53	12.10	-2.99	-382.11	383.99	5,170.23	5,140.74	29.48	175.353		
10,100.00	6,848.68	3,316.01	3,250.40	111.46	12.10	-2.99	-382.11	383.99	5,242.43	5,212.52	29.90	175.316		
10,200.00	6,848.71	3,316.01	3,250.40	114.40	12.10	-2.99	-382.11	383.99	5,315.52	5,285.21	30.31	175.382		
10,300.00	6,848.73	3,316.01	3,250.40	117.34	12.10	-2.99	-382.11	383.99	5,389.48	5,358.78	30.70	175.546		
10,400.00	6,848.75	3,316.01	3,250.40	120.29	12.10	-2.99	-382.11	383.99	5,464.27	5,433.19	31.08	175.798		
10,500.00	6,848.78	3,316.01	3,250.40	123.24	12.10	-2.99	-382.11	383.99	5,539.86	5,508.41	31.45	176.134		
10,600.00	6,848.80	3,316.01	3,250.40	126.20	12.10	-2.99	-382.11	383.99	5,616.21	5,584.40	31.81	176.548		
10,700.00	6,848.83	3,316.01	3,250.40	129.16	12.10	-2.99	-382.11	383.99	5,693.29	5,661.13	32.16	177.033		
10,800.00	6,848.85	3,316.01	3,250.40	132.12	12.10	-2.99	-382.11	383.99	5,771.07	5,738.58	32.50	177.586		
10,900.00	6,848.88	3,316.01	3,250.40	135.08	12.10	-2.99	-382.11	383.99	5,849.53	5,816.71	32.83	178.202		
11,000.00	6,848.90	3,316.01	3,250.40	138.05	12.10	-2.99	-382.11	383.99	5,928.64	5,895.50	33.14	178.876		
11,100.00	6,848.92	3,316.01	3,250.40	141.02	12.10	-2.99	-382.11	383.99	6,008.37	5,974.92	33.45	179.605		
11,200.00	6,848.95	3,316.01	3,250.40	144.00	12.10	-2.99	-382.11	383.99	6,088.70	6,054.95	33.75	180.385		
11,300.00	6,848.97	3,316.01	3,250.40	146.97	12.10	-2.99	-382.11	383.99	6,169.61	6,135.56	34.05	181.213		
11,400.00	6,849.00	3,316.01	3,250.40	149.95	12.10	-2.99	-382.11	383.99	6,251.06	6,216.73	34.33	182.086		
11,500.00	6,849.02	3,316.01	3,250.40	152.93	12.10	-2.99	-382.11	383.99	6,333.05	6,298.45	34.61	183.000		
11,600.00	6,849.04	3,316.01	3,250.40	155.91	12.10	-2.99	-382.11	383.99	6,415.55	6,380.68	34.88	183.954		
11,700.00	6,849.07	3,316.01	3,250.40	158.90	12.10	-2.99	-382.11	383.99	6,498.54	6,463.40	35.14	184.944		
11,800.00	6,849.09	3,316.01	3,250.40	161.88	12.10	-2.99	-382.11	383.99	6,582.01	6,546.61	35.39	185.968		
11,900.00	6,849.12	3,316.01	3,250.40	164.87	12.10	-2.99	-382.11	383.99	6,665.92	6,630.28	35.64	187.025		
12,000.00	6,849.14	3,316.01	3,250.40	167.86	12.10	-2.99	-382.11	383.99	6,750.28	6,714.40	35.88	188.112		
12,100.00	6,849.17	3,316.01	3,250.40	170.85	12.10	-2.99	-382.11	383.99	6,835.06	6,798.94	36.12	189.227		
12,200.00	6,849.19	3,316.01	3,250.40	173.84	12.10	-2.99	-382.11	383.99	6,920.25	6,883.89	36.35	190.368		
12,300.00	6,849.21	3,316.01	3,250.40	176.84	12.10	-2.99	-382.11	383.99	7,005.82	6,969.25	36.58	191.535		
12,400.00	6,849.24	3,316.01	3,250.40	179.83	12.10	-2.99	-382.11	383.99	7,091.78	7,054.98	36.80	192.724		
12,500.00	6,849.26	3,316.01	3,250.40	182.83	12.10	-2.99	-382.11	383.99	7,178.10	7,141.08	37.01	193.936		
12,600.00	6,849.29	3,316.01	3,250.40	185.82	12.10	-2.99	-382.11	383.99	7,264.77	7,227.54	37.22	195.168		
12,700.00	6,849.31	3,316.01	3,250.40	188.82	12.10	-2.99	-382.11	383.99	7,351.77	7,314.34	37.43	196.419		
12,800.00	6,849.34	3,316.01	3,250.40	191.82	12.10	-2.99	-382.11	383.99	7,439.11	7,401.48	37.63	197.688		
12,900.00	6,849.36	3,316.01	3,250.40	194.82	12.10	-2.99	-382.11	383.99	7,526.76	7,488.93	37.83	198.974		
13,000.00	6,849.38	3,316.01	3,250.40	197.82	12.10	-2.99	-382.11	383.99	7,614.71	7,576.69	38.02	200.275		
13,100.00	6,849.41	3,316.01	3,250.40	200.83	12.10	-2.99	-382.11	383.99	7,702.96	7,664.75	38.21	201.592		
13,200.00	6,849.43	3,316.01	3,250.40	203.83	12.10	-2.99	-382.11	383.99	7,791.49	7,753.09	38.40	202.922		
13,300.00	6,849.46	3,316.01	3,250.40	206.83	12.10	-2.99	-382.11	383.99	7,880.30	7,841.72	38.58	204.264		
13,400.00	6,849.48	3,316.01	3,250.40	209.84	12.10	-2.99	-382.11	383.99	7,969.37	7,930.61	38.76	205.619		
13,500.00	6,849.50	3,316.01	3,250.40	212.84	12.10	-2.99	-382.11	383.99	8,058.70	8,019.76	38.93	206.985		
13,600.00	6,849.53	3,316.01	3,250.40	215.85	12.10	-2.99	-382.11	383.99	8,148.27	8,109.17	39.11	208.361		
13,700.00	6,849.55	3,316.01	3,250.40	218.86	12.10	-2.99	-382.11	383.99	8,238.09	8,198.81	39.28	209.747		
13,800.00	6,849.58	3,316.01	3,250.40	221.87	12.10	-2.99	-382.11	383.99	8,328.14	8,288.69	39.44	211.142		
13,900.00	6,849.60	3,316.01	3,250.40	224.87	12.10	-2.99	-382.11	383.99	8,418.41	8,378.80	39.61	212.545		
14,000.00	6,849.63	3,316.01	3,250.40	227.88	12.10	-2.99	-382.11	383.99	8,508.90	8,469.13	39.77	213.956		
14,100.00	6,849.65	3,316.01	3,250.40	230.89	12.10	-2.99	-382.11	383.99	8,599.60	8,559.67	39.93	215.373		

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison 13P - OH - As Drilled													Offset Site Error:	0.00 ft
Survey Program: 357-MWD SDI													Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (ft)	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
14,200.00	6,849.67	3,316.01	3,250.40	233.90	12.10	-2.99	-382.11	383.99	8,690.50	8,650.42	40.09	216.798		
14,300.00	6,849.70	3,316.01	3,250.40	236.92	12.10	-2.99	-382.11	383.99	8,781.61	8,741.37	40.24	218.228		
14,400.00	6,849.72	3,316.01	3,250.40	239.93	12.10	-2.99	-382.11	383.99	8,872.90	8,832.51	40.39	219.663		
14,500.00	6,849.75	3,316.01	3,250.40	242.94	12.10	-2.99	-382.11	383.99	8,964.38	8,923.84	40.54	221.104		
14,600.00	6,849.77	3,316.01	3,250.40	245.95	12.10	-2.99	-382.11	383.99	9,056.04	9,015.35	40.69	222.549		
14,700.00	6,849.80	3,316.01	3,250.40	248.96	12.10	-2.99	-382.11	383.99	9,147.87	9,107.04	40.84	223.998		
14,800.00	6,849.82	3,316.01	3,250.40	251.98	12.10	-2.99	-382.11	383.99	9,239.88	9,198.89	40.98	225.451		
14,900.00	6,849.84	3,316.01	3,250.40	254.99	12.10	-2.99	-382.11	383.99	9,332.05	9,290.92	41.13	226.907		
15,000.00	6,849.87	3,316.01	3,250.40	258.01	12.10	-2.99	-382.11	383.99	9,424.38	9,383.11	41.27	228.366		
15,100.00	6,849.89	3,316.01	3,250.40	261.02	12.10	-2.99	-382.11	383.99	9,516.86	9,475.45	41.41	229.827		
15,200.00	6,849.92	3,316.01	3,250.40	264.04	12.10	-2.99	-382.11	383.99	9,609.49	9,567.95	41.55	231.290		
15,300.00	6,849.94	3,316.01	3,250.40	267.05	12.10	-2.99	-382.11	383.99	9,702.27	9,660.59	41.68	232.755		
15,400.00	6,849.97	3,316.01	3,250.40	270.07	12.10	-2.99	-382.11	383.99	9,795.20	9,753.38	41.82	234.222		
15,500.00	6,849.99	3,316.01	3,250.40	273.08	12.10	-2.99	-382.11	383.99	9,888.26	9,846.30	41.95	235.690		
15,600.00	6,850.01	3,316.01	3,250.40	276.10	12.10	-2.99	-382.11	383.99	9,981.45	9,939.36	42.09	237.158		
15,700.00	6,850.04	3,316.01	3,250.40	279.12	12.10	-2.99	-382.11	383.99	10,074.78	10,032.56	42.22	238.628		
15,800.00	6,850.06	3,316.01	3,250.40	282.14	12.10	-2.99	-382.11	383.99	10,168.23	10,125.88	42.35	240.097		
15,900.00	6,850.09	3,316.01	3,250.40	285.15	12.10	-2.99	-382.11	383.99	10,261.80	10,219.32	42.48	241.567		
16,000.00	6,850.11	3,316.01	3,250.40	288.17	12.10	-2.99	-382.11	383.99	10,355.50	10,312.89	42.61	243.036		
16,100.00	6,850.13	3,316.01	3,250.40	291.19	12.10	-2.99	-382.11	383.99	10,449.31	10,406.58	42.74	244.505		
16,200.00	6,850.16	3,316.01	3,250.40	294.21	12.10	-2.99	-382.11	383.99	10,543.24	10,500.38	42.86	245.974		
16,300.00	6,850.18	3,316.01	3,250.40	297.23	12.10	-2.99	-382.11	383.99	10,637.28	10,594.29	42.99	247.441		
16,400.00	6,850.21	3,316.01	3,250.40	300.25	12.10	-2.99	-382.11	383.99	10,731.42	10,688.31	43.11	248.907		
16,500.00	6,850.23	3,316.01	3,250.40	303.27	12.10	-2.99	-382.11	383.99	10,825.67	10,782.43	43.24	250.373		
16,600.00	6,850.26	3,316.01	3,250.40	306.28	12.10	-2.99	-382.11	383.99	10,920.02	10,876.66	43.36	251.836		
16,700.00	6,850.28	3,316.01	3,250.40	309.30	12.10	-2.99	-382.11	383.99	11,014.47	10,970.99	43.48	253.298		
16,800.00	6,850.30	3,316.01	3,250.40	312.32	12.10	-2.99	-382.11	383.99	11,109.02	11,065.42	43.61	254.759		
16,900.00	6,850.33	3,316.01	3,250.40	315.35	12.10	-2.99	-382.11	383.99	11,203.67	11,159.94	43.73	256.217		
17,000.00	6,850.35	3,316.01	3,250.40	318.37	12.10	-2.99	-382.11	383.99	11,298.40	11,254.55	43.85	257.673		
17,100.00	6,850.38	3,316.01	3,250.40	321.39	12.10	-2.99	-382.11	383.99	11,393.23	11,349.26	43.97	259.127		
17,200.00	6,850.40	3,316.01	3,250.40	324.41	12.10	-2.99	-382.11	383.99	11,488.14	11,444.05	44.09	260.578		
17,300.00	6,850.43	3,316.01	3,250.40	327.43	12.10	-2.99	-382.11	383.99	11,583.14	11,538.93	44.21	262.027		
17,400.00	6,850.45	3,316.01	3,250.40	330.45	12.10	-2.99	-382.11	383.99	11,678.22	11,633.90	44.32	263.473		
17,500.00	6,850.47	3,316.01	3,250.40	333.47	12.10	-2.99	-382.11	383.99	11,773.39	11,728.95	44.44	264.916		
17,600.00	6,850.50	3,316.01	3,250.40	336.49	12.10	-2.99	-382.11	383.99	11,868.63	11,824.07	44.56	266.356		
17,700.00	6,850.52	3,316.01	3,250.40	339.52	12.10	-2.99	-382.11	383.99	11,963.95	11,919.28	44.68	267.793		
17,800.00	6,850.55	3,316.01	3,250.40	342.54	12.10	-2.99	-382.11	383.99	12,059.35	12,014.56	44.79	269.227		
17,900.00	6,850.57	3,316.01	3,250.40	345.56	12.10	-2.99	-382.11	383.99	12,154.82	12,109.91	44.91	270.658		
18,000.00	6,850.59	3,316.01	3,250.40	348.58	12.10	-2.99	-382.11	383.99	12,250.36	12,205.34	45.02	272.085		
18,100.00	6,850.62	3,316.01	3,250.40	351.61	12.10	-2.99	-382.11	383.99	12,345.98	12,300.84	45.14	273.509		
18,200.00	6,850.64	3,316.01	3,250.40	354.63	12.10	-2.99	-382.11	383.99	12,441.66	12,396.41	45.25	274.929		
18,300.00	6,850.67	3,316.01	3,250.40	357.65	12.10	-2.99	-382.11	383.99	12,537.41	12,492.04	45.37	276.345		
18,400.00	6,850.69	3,316.01	3,250.40	360.67	12.10	-2.99	-382.11	383.99	12,633.23	12,587.74	45.48	277.758		
18,500.00	6,850.72	3,316.01	3,250.40	363.70	12.10	-2.99	-382.11	383.99	12,729.11	12,683.51	45.60	279.166		
18,600.00	6,850.74	3,316.01	3,250.40	366.72	12.10	-2.99	-382.11	383.99	12,825.05	12,779.34	45.71	280.571		
18,700.00	6,850.76	3,316.01	3,250.40	369.75	12.10	-2.99	-382.11	383.99	12,921.06	12,875.23	45.82	281.971		
18,800.00	6,850.79	3,316.01	3,250.40	372.77	12.10	-2.99	-382.11	383.99	13,017.12	12,971.18	45.94	283.368		
18,900.00	6,850.81	3,316.01	3,250.40	375.79	12.10	-2.99	-382.11	383.99	13,113.24	13,067.19	46.05	284.760		
19,000.00	6,850.84	3,316.01	3,250.40	378.82	12.10	-2.99	-382.11	383.99	13,209.43	13,163.26	46.16	286.148		
19,100.00	6,850.86	3,316.01	3,250.40	381.84	12.10	-2.99	-382.11	383.99	13,305.66	13,259.39	46.28	287.532		
19,200.00	6,850.89	3,316.01	3,250.40	384.87	12.10	-2.99	-382.11	383.99	13,401.96	13,355.57	46.39	288.911		
19,300.00	6,850.91	3,316.01	3,250.40	387.89	12.10	-2.99	-382.11	383.99	13,498.30	13,451.80	46.50	290.286		

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison 13P - OH - As Drilled													Offset Site Error:	0.00 ft
Survey Program: 357-MWD SDI													Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Rule Assigned:				Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
19,400.00	6,850.93	3,316.01	3,250.40	390.91	12.10	-2.99	-382.11	383.99	13,594.70	13,548.09	46.61	291.656		
19,500.00	6,850.96	3,316.01	3,250.40	393.94	12.10	-2.99	-382.11	383.99	13,691.15	13,644.43	46.72	293.022		
19,600.00	6,850.98	3,316.01	3,250.40	396.96	12.10	-2.99	-382.11	383.99	13,787.66	13,740.82	46.84	294.383		
19,673.90	6,851.00	3,316.01	3,250.40	399.20	12.10	-2.99	-382.11	383.99	13,859.00	13,812.08	46.92	295.386		
19,700.00	6,851.01	3,316.01	3,250.40	399.99	12.10	-2.99	-382.11	383.99	13,884.21	13,837.26	46.95	295.740		
19,773.90	6,851.02	3,316.01	3,250.40	402.22	12.10	-2.99	-382.11	383.99	13,955.59	13,908.56	47.03	296.739		



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit 061 - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 0-INCLINOMETER													Offset Well Error:	0.00 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
0.00	0.00	0.00	0.00	0.00	0.00	96.25	-690.65	6,303.12	6,342.20					
100.00	100.00	0.00	0.00	0.30	0.00	96.25	-690.65	6,303.12	6,340.92	6,340.63	0.30	N/A		
148.30	148.30	17.31	17.31	0.47	0.24	96.25	-690.65	6,303.12	6,340.85	6,340.13	0.71	8,869.860		
200.00	200.00	69.01	69.01	0.66	0.97	96.25	-690.65	6,303.12	6,340.85	6,339.22	1.63	3,891.455		
300.00	300.00	169.01	169.01	1.01	2.39	96.25	-690.65	6,303.12	6,340.85	6,337.45	3.40	1,865.830		
400.00	400.00	269.01	269.01	1.37	4.74	96.25	-690.65	6,303.12	6,340.85	6,334.74	6.11	1,037.635		
500.00	500.00	369.01	369.01	1.73	7.78	96.25	-690.65	6,303.12	6,340.85	6,331.34	9.51	667.023		
600.00	599.98	468.99	468.99	2.08	10.81	-28.49	-690.65	6,303.12	6,339.31	6,326.43	12.89	491.881		
700.00	699.84	566.76	566.74	2.42	13.78	-28.56	-689.66	6,303.13	6,334.61	6,318.41	16.20	391.092		
800.00	799.45	664.26	664.24	2.77	16.74	-28.67	-690.13	6,303.12	6,327.00	6,307.50	19.51	324.360		
900.00	898.70	767.74	767.71	3.13	19.88	-28.82	-690.65	6,303.12	6,316.35	6,293.35	23.00	274.582		
963.97	961.95	830.99	830.96	3.37	21.80	-28.95	-690.65	6,303.12	6,307.91	6,282.76	25.16	250.751		
1,000.00	997.50	866.54	866.52	3.51	22.88	-28.97	-690.65	6,303.12	6,302.82	6,276.45	26.37	239.045		
1,100.00	1,096.19	965.23	965.21	3.90	25.88	-29.04	-690.65	6,303.12	6,288.67	6,258.95	29.73	211.560		
1,200.00	1,194.89	1,062.82	1,062.79	4.30	28.84	-29.12	-689.86	6,303.12	6,274.46	6,241.40	33.06	189.818		
1,300.00	1,293.58	1,160.03	1,159.99	4.70	31.80	-29.19	-690.15	6,303.12	6,260.36	6,223.98	36.38	172.095		
1,400.00	1,392.27	1,261.32	1,261.28	5.11	34.87	-29.26	-690.65	6,303.12	6,246.29	6,206.46	39.83	156.837		
1,500.00	1,490.96	1,360.01	1,359.97	5.52	37.87	-29.33	-690.65	6,303.12	6,232.18	6,188.98	43.20	144.266		
1,600.00	1,589.65	1,458.70	1,458.66	5.94	40.87	-29.40	-690.65	6,303.12	6,218.09	6,171.51	46.57	133.510		
1,700.00	1,688.34	1,557.40	1,557.35	6.36	43.86	-29.47	-690.65	6,303.12	6,204.00	6,154.05	49.95	124.204		
1,800.00	1,787.03	1,655.02	1,654.97	6.78	46.83	-29.56	-689.71	6,303.13	6,189.84	6,136.54	53.30	116.142		
1,900.00	1,885.73	1,752.59	1,752.54	7.20	49.79	-29.63	-689.99	6,303.12	6,175.80	6,119.16	56.64	109.036		
2,000.00	1,984.42	1,850.21	1,850.15	7.62	52.76	-29.69	-690.47	6,303.12	6,161.78	6,101.80	59.99	102.718		
2,100.00	2,083.11	1,952.18	1,952.12	8.04	55.85	-29.77	-690.65	6,303.12	6,147.75	6,084.28	63.47	96.865		
2,200.00	2,181.80	2,050.87	2,050.81	8.46	58.85	-29.84	-690.65	6,303.12	6,133.71	6,066.86	66.85	91.755		
2,300.00	2,280.49	2,149.02	2,148.95	8.89	61.83	-29.93	-689.61	6,303.13	6,119.60	6,049.38	70.21	87.156		
2,400.00	2,379.18	2,245.93	2,245.86	9.31	64.77	-30.00	-689.88	6,303.12	6,105.61	6,032.06	73.54	83.021		
2,500.00	2,477.87	2,342.91	2,342.83	9.74	67.72	-30.07	-690.49	6,303.12	6,091.65	6,014.78	76.87	79.242		
2,600.00	2,576.56	2,445.66	2,445.58	10.16	70.84	-30.15	-690.65	6,303.12	6,077.67	5,997.29	80.38	75.611		
2,700.00	2,675.26	2,544.35	2,544.27	10.59	73.84	-30.22	-690.65	6,303.12	6,063.68	5,979.92	83.77	72.389		
2,800.00	2,773.95	2,643.04	2,642.96	11.02	76.83	-30.30	-690.65	6,303.12	6,049.71	5,962.56	87.15	69.417		
2,900.00	2,872.64	2,741.74	2,741.65	11.44	79.83	-30.38	-690.65	6,303.12	6,035.75	5,945.21	90.53	66.668		
3,000.00	2,971.33	2,840.10	2,840.00	11.87	82.82	-30.47	-689.26	6,303.13	6,021.69	5,927.78	93.91	64.122		
3,100.00	3,070.02	2,938.13	2,938.03	12.30	85.80	-30.54	-689.40	6,303.13	6,007.76	5,910.48	97.28	61.760		
3,200.00	3,168.71	3,036.19	3,036.09	12.73	88.77	-30.62	-689.69	6,303.13	5,993.85	5,893.21	100.64	59.555		
3,300.00	3,267.40	3,134.28	3,134.18	13.16	91.75	-30.69	-690.13	6,303.12	5,979.96	5,875.95	104.01	57.493		
3,400.00	3,366.10	3,235.22	3,235.11	13.58	94.82	-30.77	-690.65	6,303.12	5,966.09	5,858.63	107.47	55.516		
3,500.00	3,464.79	3,333.91	3,333.80	14.01	97.81	-30.84	-690.65	6,303.12	5,952.20	5,841.34	110.85	53.694		
3,600.00	3,563.48	3,432.60	3,432.49	14.44	100.81	-30.92	-690.65	6,303.12	5,938.31	5,824.07	114.24	51.981		
3,700.00	3,662.17	3,530.99	3,530.87	14.87	103.80	-31.02	-689.42	6,303.13	5,924.35	5,806.73	117.62	50.369		
3,800.00	3,760.86	3,628.54	3,628.41	15.30	106.76	-31.09	-689.64	6,303.13	5,910.51	5,789.53	120.97	48.858		
3,900.00	3,859.55	3,726.14	3,726.01	15.73	109.73	-31.17	-690.16	6,303.12	5,896.69	5,772.36	124.33	47.428		
4,000.00	3,958.24	3,827.39	3,827.26	16.16	112.80	-31.25	-690.65	6,303.12	5,882.88	5,755.08	127.79	46.034		
4,100.00	4,056.94	3,926.08	3,925.95	16.59	115.80	-31.33	-690.65	6,303.12	5,869.05	5,737.87	131.18	44.739		
4,200.00	4,155.63	4,024.78	4,024.64	17.02	118.80	-31.41	-690.65	6,303.12	5,855.23	5,720.66	134.57	43.510		
4,300.00	4,254.32	4,123.28	4,123.14	17.45	121.79	-31.50	-689.64	6,303.13	5,841.37	5,703.41	137.96	42.342		
4,400.00	4,353.01	4,221.29	4,221.15	17.88	124.76	-31.58	-689.80	6,303.13	5,827.59	5,686.26	141.33	41.235		
4,500.00	4,451.70	4,319.35	4,319.20	18.30	127.74	-31.66	-690.16	6,303.12	5,813.83	5,669.13	144.70	40.180		
4,600.00	4,550.39	4,419.56	4,419.40	18.73	130.78	-31.74	-690.65	6,303.12	5,800.08	5,651.95	148.13	39.155		
4,700.00	4,649.08	4,518.25	4,518.10	19.16	133.78	-31.82	-690.65	6,303.12	5,786.33	5,634.81	151.52	38.188		
4,800.00	4,747.77	4,616.94	4,616.79	19.59	136.78	-31.91	-690.65	6,303.12	5,772.58	5,617.67	154.91	37.264		
4,900.00	4,846.47	4,715.41	4,715.25	20.02	139.77	-32.00	-690.09	6,303.12	5,758.82	5,600.53	158.30	36.380		

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit 061 - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 0-INCLINOMETER													Offset Well Error:	0.00 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
5,000.00	4,945.16	4,813.66	4,813.50	20.45	142.75	-32.08	-690.25	6,303.12	5,745.11	5,583.44	161.67	35.535		
5,100.00	5,043.85	4,911.94	4,911.78	20.88	145.74	-32.16	-690.57	6,303.12	5,731.42	5,566.37	165.05	34.725		
5,200.00	5,142.54	5,011.71	5,011.55	21.31	148.77	-32.25	-690.65	6,303.12	5,717.73	5,549.25	168.48	33.938		
5,300.00	5,241.23	5,110.41	5,110.24	21.74	151.76	-32.33	-690.65	6,303.12	5,704.05	5,532.18	171.87	33.188		
5,400.00	5,339.92	5,208.49	5,208.33	22.17	154.74	-32.43	-690.09	6,303.12	5,690.35	5,515.11	175.24	32.471		
5,500.00	5,438.61	5,306.48	5,306.30	22.61	157.72	-32.51	-690.49	6,303.12	5,676.71	5,498.10	178.61	31.782		
5,600.00	5,537.31	5,406.49	5,406.32	23.04	160.76	-32.59	-690.65	6,303.12	5,663.08	5,481.03	182.05	31.108		
5,700.00	5,636.00	5,505.18	5,505.01	23.47	163.75	-32.68	-690.65	6,303.12	5,649.45	5,464.01	185.44	30.465		
5,800.00	5,734.69	5,603.79	5,603.61	23.90	166.75	-32.78	-690.11	6,303.12	5,635.81	5,446.98	188.83	29.846		
5,900.00	5,833.38	5,702.14	5,701.97	24.33	169.73	-32.86	-690.24	6,303.12	5,622.21	5,430.00	192.21	29.250		
6,000.00	5,932.07	5,800.54	5,800.36	24.76	172.72	-32.95	-690.54	6,303.12	5,608.63	5,413.03	195.60	28.674		
6,100.00	6,030.76	5,899.95	5,899.77	25.19	175.74	-33.04	-690.65	6,303.12	5,595.06	5,396.05	199.01	28.114		
6,200.00	6,129.45	5,998.65	5,998.47	25.62	178.74	-33.13	-690.65	6,303.12	5,581.49	5,379.09	202.40	27.576		
6,300.00	6,228.15	6,097.34	6,097.16	26.05	181.73	-33.22	-690.65	6,303.12	5,567.94	5,362.15	205.80	27.055		
6,370.81	6,298.03	6,167.22	6,167.04	26.35	183.85	-33.28	-690.65	6,303.12	5,558.36	5,350.16	208.20	26.697		
6,400.00	6,326.74	6,195.93	6,195.75	26.48	184.73	-25.82	-690.65	6,303.12	5,553.75	5,344.56	209.19	26.549		
6,450.00	6,375.33	6,244.52	6,244.34	26.73	186.20	-18.27	-690.65	6,303.12	5,542.80	5,331.93	210.87	26.286		
6,500.00	6,422.93	6,292.12	6,291.95	26.99	187.65	-13.93	-690.65	6,303.12	5,528.07	5,315.55	212.52	26.012		
6,550.00	6,469.25	6,338.44	6,338.26	27.29	189.05	-11.15	-690.65	6,303.12	5,509.64	5,295.51	214.13	25.730		
6,600.00	6,513.99	6,383.18	6,383.00	27.61	190.41	-9.22	-690.65	6,303.12	5,487.62	5,271.93	215.69	25.442		
6,650.00	6,556.88	6,426.07	6,425.89	27.96	191.71	-7.80	-690.65	6,303.12	5,462.16	5,244.97	217.19	25.149		
6,700.00	6,597.66	6,466.85	6,466.67	28.34	192.95	-6.70	-690.65	6,303.12	5,433.40	5,214.78	218.62	24.854		
6,750.00	6,636.07	6,505.26	6,505.08	28.76	194.12	-5.81	-690.65	6,303.12	5,401.53	5,181.57	219.96	24.557		
6,800.00	6,671.88	6,541.07	6,540.90	29.21	195.20	-5.06	-690.65	6,303.12	5,366.73	5,145.52	221.21	24.260		
6,850.00	6,704.87	6,574.07	6,573.89	29.71	196.21	-4.39	-690.65	6,303.12	5,329.23	5,106.87	222.37	23.966		
6,900.00	6,734.84	6,604.03	6,603.85	30.25	197.12	-3.76	-690.65	6,303.12	5,289.26	5,065.85	223.41	23.675		
6,950.00	6,761.59	6,630.78	6,630.61	30.85	197.93	-3.11	-690.65	6,303.12	5,247.06	5,022.71	224.35	23.388		
7,000.00	6,784.97	6,654.16	6,653.98	31.50	198.64	-2.40	-690.65	6,303.12	5,202.89	4,977.73	225.16	23.108		
7,050.00	6,804.83	6,674.02	6,673.84	32.20	199.24	-1.52	-690.65	6,303.12	5,157.02	4,931.17	225.85	22.834		
7,100.00	6,821.05	6,690.24	6,690.06	32.96	199.73	-0.29	-690.65	6,303.12	5,109.73	4,883.33	226.41	22.569		
7,150.00	6,833.53	6,702.72	6,702.54	33.77	200.11	1.72	-690.65	6,303.12	5,061.33	4,834.49	226.84	22.313		
7,200.00	6,842.18	6,711.38	6,711.20	34.62	200.37	5.94	-690.65	6,303.12	5,012.10	4,784.97	227.13	22.067		
7,250.00	6,846.97	6,716.16	6,715.98	35.52	200.52	20.79	-690.65	6,303.12	4,962.35	4,735.06	227.29	21.832		
7,286.15	6,848.00	6,717.19	6,717.01	36.18	200.55	89.49	-690.65	6,303.12	4,926.23	4,698.90	227.33	21.670		
7,300.00	6,848.00	6,717.20	6,717.02	36.44	200.55	89.49	-690.65	6,303.12	4,912.39	4,685.06	227.33	21.610		
7,400.00	6,848.03	6,717.22	6,717.04	38.40	200.55	89.50	-690.65	6,303.12	4,812.42	4,585.10	227.32	21.170		
7,500.00	6,848.05	6,717.24	6,717.06	40.49	200.55	89.51	-690.65	6,303.12	4,712.46	4,485.15	227.32	20.731		
7,600.00	6,848.08	6,717.27	6,717.09	42.70	200.55	89.52	-690.65	6,303.12	4,612.50	4,385.19	227.31	20.291		
7,700.00	6,848.10	6,717.29	6,717.11	45.01	200.55	89.53	-690.65	6,303.12	4,512.55	4,285.24	227.31	19.852		
7,800.00	6,848.12	6,717.32	6,717.14	47.40	200.55	89.54	-690.65	6,303.12	4,412.59	4,185.28	227.31	19.412		
7,900.00	6,848.15	6,717.34	6,717.16	49.86	200.56	89.55	-690.65	6,303.12	4,312.64	4,085.33	227.31	18.973		
8,000.00	6,848.17	6,717.36	6,717.19	52.39	200.56	89.56	-690.65	6,303.12	4,212.69	3,985.38	227.30	18.533		
8,100.00	6,848.20	6,717.39	6,717.21	54.96	200.56	89.57	-690.65	6,303.12	4,112.74	3,885.43	227.30	18.094		
8,200.00	6,848.22	6,717.41	6,717.23	57.58	200.56	89.58	-690.65	6,303.12	4,012.79	3,785.49	227.30	17.654		
8,300.00	6,848.25	6,717.44	6,717.26	60.24	200.56	89.59	-690.65	6,303.12	3,912.85	3,685.55	227.30	17.214		
8,400.00	6,848.27	6,717.46	6,717.28	62.94	200.56	89.60	-690.65	6,303.12	3,812.91	3,585.60	227.30	16.775		
8,500.00	6,848.29	6,717.49	6,717.31	65.66	200.56	89.61	-690.65	6,303.12	3,712.97	3,485.67	227.30	16.335		
8,600.00	6,848.32	6,717.51	6,717.33	68.42	200.56	89.62	-690.65	6,303.12	3,613.03	3,385.73	227.30	15.895		
8,700.00	6,848.34	6,717.53	6,717.36	71.19	200.56	89.63	-690.65	6,303.12	3,513.10	3,285.80	227.31	15.455		
8,800.00	6,848.37	6,717.56	6,717.38	73.99	200.56	89.64	-690.65	6,303.12	3,413.18	3,185.87	227.31	15.016		
8,900.00	6,848.39	6,717.58	6,717.40	76.80	200.56	89.65	-690.65	6,303.12	3,313.26	3,085.94	227.31	14.576		
9,000.00	6,848.42	6,717.61	6,717.43	79.63	200.56	89.67	-690.65	6,303.12	3,213.34	2,986.02	227.32	14.136		

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit 061 - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 0-INCLINOMETER													Offset Well Error:	0.00 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Distance Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
9,100.00	6,848.44	6,717.63	6,717.45	82.47	200.56	89.68	-690.65	6,303.12	3,113.43	2,886.10	227.32	13.696		
9,200.00	6,848.46	6,717.66	6,717.48	85.33	200.56	89.69	-690.65	6,303.12	3,013.52	2,786.19	227.33	13.256		
9,300.00	6,848.49	6,717.68	6,717.50	88.20	200.57	89.70	-690.65	6,303.12	2,913.62	2,686.28	227.34	12.816		
9,400.00	6,848.51	6,717.70	6,717.52	91.08	200.57	89.71	-690.65	6,303.12	2,813.73	2,586.38	227.35	12.376		
9,500.00	6,848.54	6,717.73	6,717.55	93.97	200.57	89.72	-690.65	6,303.12	2,713.85	2,486.48	227.37	11.936		
9,600.00	6,848.56	6,717.75	6,717.57	96.87	200.57	89.73	-690.65	6,303.12	2,613.97	2,386.59	227.38	11.496		
9,700.00	6,848.58	6,717.78	6,717.60	99.77	200.57	89.74	-690.65	6,303.12	2,514.11	2,286.70	227.40	11.056		
9,800.00	6,848.61	6,717.80	6,717.62	102.69	200.57	89.75	-690.65	6,303.12	2,414.25	2,186.82	227.43	10.615		
9,900.00	6,848.63	6,717.82	6,717.65	105.61	200.57	89.76	-690.65	6,303.12	2,314.41	2,086.95	227.46	10.175		
10,000.00	6,848.66	6,717.85	6,717.67	108.53	200.57	89.77	-690.65	6,303.12	2,214.58	1,987.08	227.50	9.734		
10,100.00	6,848.68	6,717.87	6,717.69	111.46	200.57	89.78	-690.65	6,303.12	2,114.77	1,887.22	227.55	9.294		
10,200.00	6,848.71	6,717.90	6,717.72	114.40	200.57	89.79	-690.65	6,303.12	2,014.98	1,787.37	227.61	8.853		
10,300.00	6,848.73	6,717.92	6,717.74	117.34	200.57	89.80	-690.65	6,303.12	1,915.21	1,687.52	227.69	8.412		
10,400.00	6,848.75	6,717.95	6,717.77	120.29	200.57	89.81	-690.65	6,303.12	1,815.46	1,587.68	227.78	7.970		
10,500.00	6,848.78	6,717.97	6,717.79	123.24	200.57	89.82	-690.65	6,303.12	1,715.75	1,487.84	227.90	7.528		
10,600.00	6,848.80	6,717.99	6,717.82	126.20	200.58	89.83	-690.65	6,303.12	1,616.07	1,388.01	228.06	7.086		
10,700.00	6,848.83	6,718.02	6,717.84	129.16	200.58	89.84	-690.65	6,303.12	1,516.43	1,288.17	228.26	6.643		
10,800.00	6,848.85	6,718.04	6,717.86	132.12	200.58	89.85	-690.65	6,303.12	1,416.84	1,188.32	228.52	6.200		
10,900.00	6,848.88	6,718.07	6,717.89	135.08	200.58	89.86	-690.65	6,303.12	1,317.32	1,088.46	228.86	5.756		
11,000.00	6,848.90	6,718.09	6,717.91	138.05	200.58	89.87	-690.65	6,303.12	1,217.87	988.56	229.31	5.311		
11,100.00	6,848.92	6,718.12	6,717.94	141.02	200.58	89.88	-690.65	6,303.12	1,118.52	888.61	229.91	4.865		
11,200.00	6,848.95	6,718.14	6,717.96	144.00	200.58	89.89	-690.65	6,303.12	1,019.30	788.57	230.73	4.418		
11,300.00	6,848.97	6,718.16	6,717.98	146.97	200.58	89.91	-690.65	6,303.12	920.25	688.39	231.86	3.969		
11,400.00	6,849.00	6,718.19	6,718.01	149.95	200.58	89.92	-690.65	6,303.12	821.42	587.98	233.45	3.519		
11,500.00	6,849.02	6,718.21	6,718.03	152.93	200.58	89.93	-690.65	6,303.12	722.93	487.20	235.73	3.067		
11,600.00	6,849.04	6,718.24	6,718.06	155.91	200.58	89.94	-690.65	6,303.12	624.90	385.83	239.08	2.614		
11,700.00	6,849.07	6,718.26	6,718.08	158.90	200.58	89.95	-690.65	6,303.12	527.62	283.48	244.15	2.161		
11,800.00	6,849.09	6,718.28	6,718.11	161.88	200.58	89.96	-690.65	6,303.12	431.59	179.47	252.12	1.712		
11,900.00	6,849.12	6,718.31	6,718.13	164.87	200.58	89.97	-690.65	6,303.12	337.87	72.57	265.30	1.274	Level 3	
12,000.00	6,849.14	6,718.33	6,718.15	167.86	200.59	89.98	-690.65	6,303.12	249.07	-39.34	288.41	0.864	Level 3	
12,100.00	6,849.17	6,718.36	6,718.18	170.85	200.59	89.99	-690.65	6,303.12	172.97	-156.39	329.36	0.525	Level 3	
12,200.00	6,849.19	6,718.38	6,718.20	173.84	200.59	90.00	-690.65	6,303.12	133.42	-239.90	373.33	0.357	Level 3	
12,210.58	6,849.19	6,718.38	6,718.21	174.16	200.59	90.00	-690.65	6,303.12	133.00	-241.64	374.64	0.355	Level 3, CC, ES, SF	
12,300.00	6,849.21	6,718.41	6,718.23	176.84	200.59	90.01	-690.65	6,303.12	160.27	-191.09	351.35	0.456	Level 3	
12,400.00	6,849.24	6,718.43	6,718.25	179.83	200.59	90.02	-690.65	6,303.12	231.45	-79.66	311.10	0.744	Level 3	
12,500.00	6,849.26	6,718.45	6,718.28	182.83	200.59	90.03	-690.65	6,303.12	318.51	32.37	286.15	1.113	Level 3	
12,600.00	6,849.29	6,718.48	6,718.30	185.82	200.59	90.04	-690.65	6,303.12	411.50	140.10	271.40	1.516		
12,700.00	6,849.31	6,718.50	6,718.32	188.82	200.59	90.05	-690.65	6,303.12	507.17	245.04	262.13	1.935		
12,800.00	6,849.34	6,718.53	6,718.35	191.82	200.59	90.06	-690.65	6,303.12	604.24	348.32	255.92	2.361		
12,900.00	6,849.36	6,718.55	6,718.37	194.82	200.59	90.07	-690.65	6,303.12	702.13	450.59	251.54	2.791		
13,000.00	6,849.38	6,718.58	6,718.40	197.82	200.59	90.08	-690.65	6,303.12	800.54	552.20	248.34	3.224		
13,100.00	6,849.41	6,718.60	6,718.42	200.83	200.59	90.09	-690.65	6,303.12	899.30	653.39	245.92	3.657		
13,200.00	6,849.43	6,718.62	6,718.44	203.83	200.59	90.10	-690.65	6,303.12	998.31	754.27	244.04	4.091		
13,300.00	6,849.46	6,718.65	6,718.47	206.83	200.59	90.11	-690.65	6,303.12	1,097.50	854.95	242.56	4.525		
13,400.00	6,849.48	6,718.67	6,718.49	209.84	200.60	90.12	-690.65	6,303.12	1,196.83	955.47	241.36	4.959		
13,500.00	6,849.50	6,718.70	6,718.52	212.84	200.60	90.13	-690.65	6,303.12	1,296.26	1,055.87	240.38	5.392		
13,600.00	6,849.53	6,718.72	6,718.54	215.85	200.60	90.14	-690.65	6,303.12	1,395.77	1,156.19	239.58	5.826		
13,700.00	6,849.55	6,718.75	6,718.57	218.86	200.60	90.16	-690.65	6,303.12	1,495.34	1,256.44	238.90	6.259		
13,800.00	6,849.58	6,718.77	6,718.59	221.87	200.60	90.17	-690.65	6,303.12	1,594.97	1,356.64	238.33	6.692		
13,900.00	6,849.60	6,718.79	6,718.61	224.87	200.60	90.18	-690.65	6,303.12	1,694.64	1,456.79	237.85	7.125		
14,000.00	6,849.63	6,718.82	6,718.64	227.88	200.60	90.19	-690.65	6,303.12	1,794.35	1,556.91	237.44	7.557		
14,100.00	6,849.65	6,718.84	6,718.66	230.89	200.60	90.20	-690.65	6,303.12	1,894.09	1,657.00	237.09	7.989		

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit 061 - OH - OH												Offset Site Error:	0.00 ft
Survey Program: 0-INCLINOMETER												Offset Well Error:	0.00 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Distance Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
14,200.00	6,849.67	6,718.87	6,718.69	233.90	200.60	90.21	-690.65	6,303.12	1,993.86	1,757.07	236.78	8.421	
14,300.00	6,849.70	6,718.89	6,718.71	236.92	200.60	90.22	-690.65	6,303.12	2,093.64	1,857.13	236.52	8.852	
14,400.00	6,849.72	6,718.91	6,718.74	239.93	200.60	90.23	-690.65	6,303.12	2,193.45	1,957.16	236.29	9.283	
14,500.00	6,849.75	6,718.94	6,718.76	242.94	200.60	90.24	-690.65	6,303.12	2,293.28	2,057.18	236.09	9.713	
14,600.00	6,849.77	6,718.96	6,718.78	245.95	200.60	90.25	-690.65	6,303.12	2,393.11	2,157.19	235.92	10.144	
14,700.00	6,849.80	6,718.99	6,718.81	248.96	200.61	90.26	-690.65	6,303.12	2,492.97	2,257.19	235.77	10.574	
14,800.00	6,849.82	6,719.01	6,718.83	251.98	200.61	90.27	-690.65	6,303.12	2,592.83	2,357.19	235.64	11.003	
14,900.00	6,849.84	6,719.04	6,718.86	254.99	200.61	90.28	-690.65	6,303.12	2,692.70	2,457.17	235.53	11.433	
15,000.00	6,849.87	6,719.06	6,718.88	258.01	200.61	90.29	-690.65	6,303.12	2,792.58	2,557.15	235.43	11.861	
15,100.00	6,849.89	6,719.08	6,718.90	261.02	200.61	90.30	-690.65	6,303.12	2,892.47	2,657.12	235.35	12.290	
15,200.00	6,849.92	6,719.11	6,718.93	264.04	200.61	90.31	-690.65	6,303.12	2,992.37	2,757.09	235.28	12.718	
15,300.00	6,849.94	6,719.13	6,718.95	267.05	200.61	90.32	-690.65	6,303.12	3,092.28	2,857.06	235.22	13.146	
15,400.00	6,849.97	6,719.16	6,718.98	270.07	200.61	90.33	-690.65	6,303.12	3,192.19	2,957.02	235.17	13.574	
15,500.00	6,849.99	6,719.18	6,719.00	273.08	200.61	90.34	-690.65	6,303.12	3,292.10	3,056.97	235.13	14.001	
15,600.00	6,850.01	6,719.21	6,719.03	276.10	200.61	90.35	-690.65	6,303.12	3,392.02	3,156.92	235.10	14.428	
15,700.00	6,850.04	6,719.23	6,719.05	279.12	200.61	90.36	-690.65	6,303.12	3,491.95	3,256.87	235.07	14.855	
15,800.00	6,850.06	6,719.25	6,719.07	282.14	200.61	90.37	-690.65	6,303.12	3,591.88	3,356.82	235.06	15.281	
15,900.00	6,850.09	6,719.28	6,719.10	285.15	200.61	90.38	-690.65	6,303.12	3,691.81	3,456.77	235.05	15.707	
16,000.00	6,850.11	6,719.30	6,719.12	288.17	200.61	90.40	-690.65	6,303.12	3,791.75	3,556.71	235.04	16.132	
16,100.00	6,850.13	6,719.33	6,719.15	291.19	200.62	90.41	-690.65	6,303.12	3,891.69	3,656.65	235.04	16.558	
16,200.00	6,850.16	6,719.35	6,719.17	294.21	200.62	90.42	-690.65	6,303.12	3,991.63	3,756.59	235.04	16.983	
16,300.00	6,850.18	6,719.37	6,719.20	297.23	200.62	90.43	-690.65	6,303.12	4,091.58	3,856.53	235.05	17.407	
16,400.00	6,850.21	6,719.40	6,719.22	300.25	200.62	90.44	-690.65	6,303.12	4,191.53	3,956.46	235.07	17.831	
16,500.00	6,850.23	6,719.42	6,719.24	303.27	200.62	90.45	-690.65	6,303.12	4,291.48	4,056.39	235.08	18.255	
16,600.00	6,850.26	6,719.45	6,719.27	306.28	200.62	90.46	-690.65	6,303.12	4,391.43	4,156.33	235.10	18.679	
16,700.00	6,850.28	6,719.47	6,719.29	309.30	200.62	90.47	-690.65	6,303.12	4,491.38	4,256.26	235.13	19.102	
16,800.00	6,850.30	6,719.50	6,719.32	312.32	200.62	90.48	-690.65	6,303.12	4,591.34	4,356.19	235.15	19.525	
16,900.00	6,850.33	6,719.52	6,719.34	315.35	200.62	90.49	-690.65	6,303.12	4,691.30	4,456.12	235.18	19.947	
17,000.00	6,850.35	6,719.54	6,719.37	318.37	200.62	90.50	-690.65	6,303.12	4,791.26	4,556.04	235.22	20.369	
17,100.00	6,850.38	6,719.57	6,719.39	321.39	200.62	90.51	-690.65	6,303.12	4,891.22	4,655.97	235.25	20.791	
17,200.00	6,850.40	6,719.59	6,719.41	324.41	200.62	90.52	-690.65	6,303.12	4,991.19	4,755.90	235.29	21.213	
17,300.00	6,850.43	6,719.62	6,719.44	327.43	200.62	90.53	-690.65	6,303.12	5,091.15	4,855.82	235.33	21.634	
17,400.00	6,850.45	6,719.64	6,719.46	330.45	200.63	90.54	-690.65	6,303.12	5,191.12	4,955.74	235.38	22.055	
17,500.00	6,850.47	6,719.67	6,719.49	333.47	200.63	90.55	-690.65	6,303.12	5,291.09	5,055.67	235.42	22.477	
17,600.00	6,850.50	6,719.69	6,719.51	336.49	200.63	90.56	-690.65	6,303.12	5,391.06	5,155.59	235.47	22.895	
17,700.00	6,850.52	6,719.71	6,719.53	339.52	200.63	90.57	-690.65	6,303.12	5,491.03	5,255.51	235.52	23.315	
17,800.00	6,850.55	6,719.74	6,719.56	342.54	200.63	90.58	-690.65	6,303.12	5,591.00	5,355.43	235.57	23.734	
17,900.00	6,850.57	6,719.76	6,719.58	345.56	200.63	90.59	-690.65	6,303.12	5,690.97	5,455.35	235.62	24.153	
18,000.00	6,850.59	6,719.79	6,719.61	348.58	200.63	90.60	-690.65	6,303.12	5,790.94	5,555.26	235.68	24.571	
18,100.00	6,850.62	6,719.81	6,719.63	351.61	200.63	90.61	-690.65	6,303.12	5,890.92	5,655.18	235.73	24.990	
18,200.00	6,850.64	6,719.83	6,719.66	354.63	200.63	90.62	-690.65	6,303.12	5,990.89	5,755.10	235.79	25.408	
18,300.00	6,850.67	6,719.86	6,719.68	357.65	200.63	90.64	-690.65	6,303.12	6,090.87	5,855.02	235.85	25.825	
18,400.00	6,850.69	6,719.88	6,719.70	360.67	200.63	90.65	-690.65	6,303.12	6,190.84	5,954.93	235.91	26.242	
18,500.00	6,850.72	6,719.91	6,719.73	363.70	200.63	90.66	-690.65	6,303.12	6,290.82	6,054.85	235.98	26.659	
18,600.00	6,850.74	6,719.93	6,719.75	366.72	200.63	90.67	-690.65	6,303.12	6,390.80	6,154.76	236.04	27.075	
18,700.00	6,850.76	6,719.96	6,719.78	369.75	200.63	90.68	-690.65	6,303.12	6,490.78	6,254.67	236.10	27.491	
18,800.00	6,850.79	6,719.98	6,719.80	372.77	200.64	90.69	-690.65	6,303.12	6,590.76	6,354.59	236.17	27.907	
18,900.00	6,850.81	6,720.00	6,719.83	375.79	200.64	90.70	-690.65	6,303.12	6,690.74	6,454.50	236.24	28.322	
19,000.00	6,850.84	6,720.03	6,719.85	378.82	200.64	90.71	-690.65	6,303.12	6,790.72	6,554.41	236.31	28.737	
19,100.00	6,850.86	6,720.05	6,719.87	381.84	200.64	90.72	-690.65	6,303.12	6,890.70	6,654.32	236.38	29.151	
19,200.00	6,850.89	6,720.08	6,719.90	384.87	200.64	90.73	-690.65	6,303.12	6,990.68	6,754.23	236.45	29.565	
19,300.00	6,850.91	6,720.10	6,719.92	387.89	200.64	90.74	-690.65	6,303.12	7,090.66	6,854.14	236.52	29.979	

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit 061 - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 0-INCLINOMETER													Offset Well Error:	0.00 ft
Reference	Offset	Semi Major Axis		Offset Wellbore Centre		Distance				Rule Assigned:		Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
19,400.00	6,850.93	6,720.13	6,719.95	390.91	200.64	90.75	-690.65	6,303.12	7,190.65	6,954.05	236.59	30.393		
19,500.00	6,850.96	6,720.15	6,719.97	393.94	200.64	90.76	-690.65	6,303.12	7,290.63	7,053.96	236.67	30.805		
19,600.00	6,850.98	6,720.17	6,719.99	396.96	200.64	90.77	-690.65	6,303.12	7,390.61	7,153.87	236.74	31.218		
19,673.90	6,851.00	6,720.19	6,720.01	399.20	200.64	90.78	-690.65	6,303.12	7,464.50	7,227.70	236.80	31.523		
19,700.00	6,851.01	6,720.20	6,720.02	399.99	200.64	90.78	-690.65	6,303.12	7,490.60	7,253.78	236.82	31.630		
19,773.90	6,851.02	6,720.22	6,720.04	402.22	200.64	90.79	-690.65	6,303.12	7,564.48	7,327.61	236.87	31.935		



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit 061M - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 0-INCLINOMETER													Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (ft)	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
0.00	0.00	0.00	0.00	0.00	0.00	111.05	-1,783.16	4,632.91	4,964.88					
100.00	100.00	19.01	19.01	0.30	0.27	111.05	-1,783.16	4,632.91	4,964.22	4,963.66	0.57	8,731.173		
200.00	200.00	119.01	119.01	0.66	1.70	111.05	-1,783.16	4,632.91	4,964.22	4,961.87	2.35	2,110.126		
300.00	300.00	219.01	219.01	1.01	3.12	111.05	-1,783.16	4,632.91	4,964.22	4,960.09	4.14	1,200.079		
400.00	400.00	319.01	319.01	1.37	5.74	111.05	-1,783.16	4,632.91	4,964.22	4,957.11	7.11	697.894		
500.00	500.00	419.01	419.01	1.73	8.78	111.05	-1,783.16	4,632.91	4,964.22	4,953.72	10.51	472.402		
600.00	599.98	517.61	517.61	2.08	11.77	-13.69	-1,782.38	4,632.91	4,962.25	4,948.40	13.85	358.327		
700.00	699.84	612.96	612.96	2.42	14.67	-13.72	-1,782.58	4,632.91	4,957.24	4,940.15	17.08	290.157		
800.00	799.45	708.11	708.10	2.77	17.56	-13.78	-1,783.02	4,632.91	4,948.93	4,928.61	20.32	243.532		
900.00	898.70	817.73	817.71	3.13	20.89	-13.87	-1,783.16	4,632.91	4,937.14	4,913.13	24.00	205.684		
963.97	961.95	880.97	880.96	3.37	22.81	-13.95	-1,783.16	4,632.91	4,927.80	4,901.65	26.15	188.415		
1,000.00	997.50	916.53	916.52	3.51	23.89	-13.96	-1,783.16	4,632.91	4,922.16	4,894.80	27.36	179.886		
1,100.00	1,096.19	1,013.40	1,013.38	3.90	26.83	-14.01	-1,782.39	4,632.91	4,906.23	4,875.57	30.66	160.027		
1,200.00	1,194.89	1,107.73	1,107.70	4.30	29.69	-14.06	-1,782.61	4,632.91	4,890.65	4,856.77	33.88	144.346		
1,300.00	1,293.58	1,202.10	1,202.07	4.70	32.56	-14.09	-1,783.07	4,632.91	4,875.17	4,838.06	37.11	131.376		
1,400.00	1,392.27	1,311.31	1,311.28	5.11	35.87	-14.14	-1,783.16	4,632.91	4,859.54	4,818.75	40.79	119.140		
1,500.00	1,490.96	1,410.00	1,409.97	5.52	38.87	-14.19	-1,783.16	4,632.91	4,843.90	4,799.75	44.15	109.711		
1,600.00	1,589.65	1,506.57	1,506.53	5.94	41.80	-14.25	-1,782.08	4,632.91	4,827.88	4,780.42	47.45	101.744		
1,700.00	1,688.34	1,599.89	1,599.84	6.36	44.64	-14.29	-1,782.35	4,632.91	4,812.34	4,761.68	50.65	95.004		
1,800.00	1,787.03	1,693.27	1,693.22	6.78	47.47	-14.33	-1,782.92	4,632.91	4,796.91	4,743.05	53.86	89.063		
1,900.00	1,885.73	1,804.79	1,804.74	7.20	50.86	-14.38	-1,783.16	4,632.91	4,781.34	4,723.73	57.62	82.987		
2,000.00	1,984.42	1,903.48	1,903.43	7.62	53.86	-14.43	-1,783.16	4,632.91	4,765.71	4,704.73	60.98	78.147		
2,100.00	2,083.11	2,002.17	2,002.12	8.04	56.86	-14.48	-1,783.16	4,632.91	4,750.08	4,685.73	64.35	73.813		
2,200.00	2,181.80	2,097.92	2,097.85	8.46	59.76	-14.54	-1,781.87	4,632.91	4,734.01	4,666.38	67.63	69.995		
2,300.00	2,280.49	2,192.34	2,192.27	8.89	62.63	-14.58	-1,782.16	4,632.91	4,718.50	4,647.63	70.87	66.575		
2,400.00	2,379.18	2,286.81	2,286.73	9.31	65.50	-14.62	-1,782.71	4,632.91	4,703.08	4,628.96	74.12	63.454		
2,500.00	2,477.87	2,396.97	2,396.89	9.74	68.84	-14.67	-1,783.16	4,632.91	4,687.61	4,609.77	77.84	60.225		
2,600.00	2,576.56	2,495.66	2,495.58	10.16	71.84	-14.72	-1,783.16	4,632.91	4,672.00	4,590.79	81.21	57.532		
2,700.00	2,675.26	2,594.20	2,594.11	10.59	74.83	-14.79	-1,782.08	4,632.91	4,656.02	4,571.45	84.57	55.053		
2,800.00	2,773.95	2,687.71	2,687.61	11.02	77.67	-14.83	-1,782.25	4,632.91	4,640.48	4,552.69	87.79	52.859		
2,900.00	2,872.64	2,781.28	2,781.17	11.44	80.52	-14.88	-1,782.72	4,632.91	4,625.05	4,534.04	91.01	50.821		
3,000.00	2,971.33	2,890.45	2,890.34	11.87	83.83	-14.93	-1,783.16	4,632.91	4,609.59	4,514.90	94.70	48.678		
3,100.00	3,070.02	2,989.14	2,989.03	12.30	86.83	-14.98	-1,783.16	4,632.91	4,594.00	4,495.93	98.07	46.845		
3,200.00	3,168.71	3,085.10	3,084.98	12.73	89.74	-15.04	-1,782.31	4,632.91	4,578.12	4,476.76	101.36	45.167		
3,300.00	3,267.40	3,177.77	3,177.65	13.16	92.56	-15.09	-1,782.66	4,632.91	4,562.66	4,458.11	104.55	43.641		
3,400.00	3,366.10	3,285.24	3,285.11	13.58	95.82	-15.14	-1,783.16	4,632.91	4,547.24	4,439.06	108.19	42.031		
3,500.00	3,464.79	3,383.93	3,383.80	14.01	98.82	-15.19	-1,783.16	4,632.91	4,531.67	4,420.11	111.56	40.620		
3,600.00	3,563.48	3,482.62	3,482.49	14.44	101.81	-15.24	-1,783.16	4,632.91	4,516.09	4,401.16	114.94	39.292		
3,700.00	3,662.17	3,581.31	3,581.18	14.87	104.81	-15.30	-1,783.16	4,632.91	4,500.52	4,382.21	118.31	38.040		
3,800.00	3,760.86	3,680.00	3,679.87	15.30	107.81	-15.35	-1,783.16	4,632.91	4,484.96	4,363.27	121.68	36.857		
3,900.00	3,859.55	3,778.70	3,778.56	15.73	110.81	-15.41	-1,783.16	4,632.91	4,469.40	4,344.34	125.06	35.738		
4,000.00	3,958.24	3,877.39	3,877.26	16.16	113.80	-15.46	-1,783.16	4,632.91	4,453.84	4,325.41	128.43	34.678		
4,100.00	4,056.94	3,976.08	3,975.95	16.59	116.80	-15.52	-1,783.16	4,632.91	4,438.28	4,306.48	131.81	33.672		
4,200.00	4,155.63	4,074.77	4,074.64	17.02	119.80	-15.57	-1,783.16	4,632.91	4,422.73	4,287.55	135.18	32.717		
4,300.00	4,254.32	4,173.46	4,173.33	17.45	122.79	-15.63	-1,783.16	4,632.91	4,407.19	4,268.63	138.56	31.808		
4,400.00	4,353.01	4,272.15	4,272.02	17.88	125.79	-15.69	-1,783.16	4,632.91	4,391.65	4,249.72	141.93	30.942		
4,500.00	4,451.70	4,370.84	4,370.71	18.30	128.79	-15.74	-1,783.16	4,632.91	4,376.11	4,230.80	145.31	30.116		
4,600.00	4,550.39	4,469.54	4,469.40	18.73	131.78	-15.80	-1,783.16	4,632.91	4,360.58	4,211.89	148.68	29.328		
4,700.00	4,649.08	4,568.23	4,568.10	19.16	134.78	-15.86	-1,783.16	4,632.91	4,345.05	4,192.99	152.06	28.575		
4,800.00	4,747.77	4,666.92	4,666.79	19.59	137.78	-15.92	-1,783.16	4,632.91	4,329.53	4,174.09	155.43	27.854		
4,900.00	4,846.47	4,765.61	4,765.48	20.02	140.78	-15.97	-1,783.16	4,632.91	4,314.01	4,155.19	158.81	27.164		
5,000.00	4,945.16	4,864.30	4,864.17	20.45	143.77	-16.03	-1,783.16	4,632.91	4,298.49	4,136.30	162.19	26.503		

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit 061M - OH - OH													Offset Site Error:	0.00 ft		
Survey Program:		0-INCLINOMETER				Offset			Semi Major Axis		Offset Wellbore Centre		Rule Assigned:		Offset Well Error:	0.00 ft
Measured Depth	Reference	Vertical	Measured	Vertical	Reference	Offset	Highside Toolface	+N/-S	+E/-W	Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)				
5,100.00		5,043.85	4,962.99	4,962.86	20.88	146.77	-16.09	-1,783.16	4,632.91	4,282.98	4,117.42	165.56	25.869			
5,200.00		5,142.54	5,061.68	5,061.55	21.31	149.77	-16.15	-1,783.16	4,632.91	4,267.47	4,098.53	168.94	25.260			
5,300.00		5,241.23	5,160.37	5,160.24	21.74	152.76	-16.21	-1,783.16	4,632.91	4,251.97	4,079.66	172.32	24.675			
5,400.00		5,339.92	5,259.07	5,258.94	22.17	155.76	-16.27	-1,783.16	4,632.91	4,236.47	4,060.78	175.69	24.113			
5,500.00		5,438.61	5,357.76	5,357.63	22.61	158.76	-16.34	-1,783.16	4,632.91	4,220.98	4,041.91	179.07	23.572			
5,600.00		5,537.31	5,456.45	5,456.32	23.04	161.76	-16.40	-1,783.16	4,632.91	4,205.49	4,023.05	182.45	23.051			
5,700.00		5,636.00	5,555.14	5,555.01	23.47	164.75	-16.46	-1,783.16	4,632.91	4,190.01	4,004.19	185.82	22.548			
5,800.00		5,734.69	5,653.83	5,653.70	23.90	167.75	-16.52	-1,783.16	4,632.91	4,174.53	3,985.33	189.20	22.064			
5,900.00		5,833.38	5,752.52	5,752.39	24.33	170.75	-16.59	-1,783.16	4,632.91	4,159.06	3,966.48	192.58	21.597			
6,000.00		5,932.07	5,851.21	5,851.08	24.76	173.74	-16.65	-1,783.16	4,632.91	4,143.59	3,947.64	195.96	21.146			
6,100.00		6,030.76	5,949.91	5,949.77	25.19	176.74	-16.71	-1,783.16	4,632.91	4,128.13	3,928.80	199.33	20.710			
6,200.00		6,129.45	6,048.60	6,048.47	25.62	179.74	-16.78	-1,783.16	4,632.91	4,112.67	3,909.96	202.71	20.288			
6,300.00		6,228.15	6,147.29	6,147.16	26.05	182.74	-16.84	-1,783.16	4,632.91	4,097.22	3,891.13	206.09	19.881			
6,370.81		6,298.03	6,217.17	6,217.04	26.35	184.86	-16.89	-1,783.16	4,632.91	4,086.28	3,877.80	208.48	19.600			
6,400.00		6,326.74	6,245.88	6,245.75	26.48	185.73	-9.28	-1,783.16	4,632.91	4,081.15	3,871.68	209.47	19.484			
6,450.00		6,375.33	6,294.48	6,294.35	26.73	187.21	-1.39	-1,783.16	4,632.91	4,069.47	3,858.33	211.13	19.274			
6,500.00		6,422.93	6,342.08	6,341.95	26.99	188.65	3.42	-1,783.16	4,632.91	4,054.21	3,841.44	212.77	19.054			
6,550.00		6,469.25	6,388.39	6,388.26	27.29	190.06	6.82	-1,783.16	4,632.91	4,035.47	3,821.10	214.36	18.825			
6,600.00		6,513.99	6,433.13	6,433.00	27.61	191.42	9.53	-1,783.16	4,632.91	4,013.36	3,797.45	215.90	18.589			
6,650.00		6,556.88	6,476.02	6,475.89	27.96	192.72	11.92	-1,783.16	4,632.91	3,988.02	3,770.64	217.38	18.346			
6,700.00		6,597.66	6,516.80	6,516.67	28.34	193.96	14.22	-1,783.16	4,632.91	3,959.61	3,740.84	218.78	18.099			
6,750.00		6,636.07	6,555.21	6,555.08	28.76	195.12	16.59	-1,783.16	4,632.91	3,928.32	3,708.23	220.09	17.848			
6,800.00		6,671.88	6,591.03	6,590.90	29.21	196.21	19.16	-1,783.16	4,632.91	3,894.34	3,673.02	221.32	17.596			
6,850.00		6,704.87	6,624.02	6,623.89	29.71	197.21	22.07	-1,783.16	4,632.91	3,857.89	3,635.44	222.44	17.343			
6,900.00		6,734.84	6,653.98	6,653.85	30.25	198.12	25.48	-1,783.16	4,632.91	3,819.19	3,595.73	223.46	17.091			
6,950.00		6,761.59	6,680.74	6,680.61	30.85	198.94	29.57	-1,783.16	4,632.91	3,778.51	3,554.14	224.37	16.840			
7,000.00		6,784.97	6,704.12	6,703.99	31.50	199.65	34.59	-1,783.16	4,632.91	3,736.09	3,510.93	225.17	16.593			
7,050.00		6,804.83	6,723.98	6,723.84	32.20	200.25	40.82	-1,783.16	4,632.91	3,692.22	3,466.37	225.85	16.348			
7,100.00		6,821.05	6,740.19	6,740.06	32.96	200.74	48.55	-1,783.16	4,632.91	3,647.17	3,420.76	226.41	16.109			
7,150.00		6,833.53	6,752.67	6,752.54	33.77	201.12	58.00	-1,783.16	4,632.91	3,601.23	3,374.38	226.85	15.875			
7,200.00		6,842.18	6,761.33	6,761.20	34.62	201.38	69.08	-1,783.16	4,632.91	3,554.69	3,327.52	227.17	15.648			
7,250.00		6,846.97	6,766.11	6,765.98	35.52	201.53	81.18	-1,783.16	4,632.91	3,507.86	3,280.48	227.38	15.427			
7,286.15		6,848.00	6,767.14	6,767.01	36.18	201.56	89.96	-1,783.16	4,632.91	3,473.98	3,246.52	227.46	15.273			
7,300.00		6,848.00	6,767.15	6,767.02	36.44	201.56	89.96	-1,783.16	4,632.91	3,461.02	3,233.54	227.48	15.215			
7,400.00		6,848.03	6,767.17	6,767.04	38.40	201.56	89.96	-1,783.16	4,632.91	3,367.65	3,139.98	227.66	14.792			
7,500.00		6,848.05	6,767.20	6,767.06	40.49	201.56	89.97	-1,783.16	4,632.91	3,274.66	3,046.73	227.93	14.367			
7,600.00		6,848.08	6,767.22	6,767.09	42.70	201.56	89.97	-1,783.16	4,632.91	3,182.11	2,953.81	228.30	13.938			
7,700.00		6,848.10	6,767.24	6,767.11	45.01	201.56	89.97	-1,783.16	4,632.91	3,090.01	2,861.24	228.77	13.507			
7,800.00		6,848.12	6,767.27	6,767.14	47.40	201.56	89.97	-1,783.16	4,632.91	2,998.43	2,769.06	229.36	13.073			
7,900.00		6,848.15	6,767.29	6,767.16	49.86	201.56	89.97	-1,783.16	4,632.91	2,907.39	2,677.31	230.09	12.636			
8,000.00		6,848.17	6,767.32	6,767.19	52.39	201.56	89.97	-1,783.16	4,632.91	2,816.97	2,586.01	230.96	12.197			
8,100.00		6,848.20	6,767.34	6,767.21	54.96	201.57	89.97	-1,783.16	4,632.91	2,727.21	2,495.22	231.99	11.756			
8,200.00		6,848.22	6,767.36	6,767.23	57.58	201.57	89.97	-1,783.16	4,632.91	2,638.20	2,405.00	233.20	11.313			
8,300.00		6,848.25	6,767.39	6,767.26	60.24	201.57	89.97	-1,783.16	4,632.91	2,549.99	2,315.40	234.59	10.870			
8,400.00		6,848.27	6,767.41	6,767.28	62.94	201.57	89.98	-1,783.16	4,632.91	2,462.69	2,226.50	236.19	10.427			
8,500.00		6,848.29	6,767.44	6,767.31	65.66	201.57	89.98	-1,783.16	4,632.91	2,376.39	2,138.38	238.01	9.985			
8,600.00		6,848.32	6,767.46	6,767.33	68.42	201.57	89.98	-1,783.16	4,632.91	2,291.20	2,051.14	240.06	9.544			
8,700.00		6,848.34	6,767.49	6,767.36	71.19	201.57	89.98	-1,783.16	4,632.91	2,207.26	1,964.90	242.35	9.108			
8,800.00		6,848.37	6,767.51	6,767.38	73.99	201.57	89.98	-1,783.16	4,632.91	2,124.70	1,879.79	244.91	8.675			
8,900.00		6,848.39	6,767.53	6,767.40	76.80	201.57	89.98	-1,783.16	4,632.91	2,043.71	1,795.96	247.75	8.249			
9,000.00		6,848.42	6,767.56	6,767.43	79.63	201.57	89.98	-1,783.16	4,632.91	1,964.46	1,713.58	250.88	7.830			
9,100.00		6,848.44	6,767.58	6,767.45	82.47	201.57	89.98	-1,783.16	4,632.91	1,887.19	1,632.87	254.32	7.420			

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit 061M - OH - OH												Offset Site Error:	0.00 ft
Survey Program: 0-INCLINOMETER												Offset Well Error:	0.00 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Distance Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
9,200.00	6,848.46	6,767.61	6,767.48	85.33	201.57	89.98	-1,783.16	4,632.91	1,812.15	1,554.07	258.08	7.022	
9,300.00	6,848.49	6,767.63	6,767.50	88.20	201.57	89.99	-1,783.16	4,632.91	1,739.62	1,477.44	262.17	6.635	
9,400.00	6,848.51	6,767.66	6,767.52	91.08	201.57	89.99	-1,783.16	4,632.91	1,669.92	1,403.33	266.60	6.264	
9,500.00	6,848.54	6,767.68	6,767.55	93.97	201.58	89.99	-1,783.16	4,632.91	1,603.44	1,332.09	271.35	5.909	
9,600.00	6,848.56	6,767.70	6,767.57	96.87	201.58	89.99	-1,783.16	4,632.91	1,540.59	1,264.17	276.42	5.573	
9,700.00	6,848.58	6,767.73	6,767.60	99.77	201.58	89.99	-1,783.16	4,632.91	1,481.82	1,200.05	281.77	5.259	
9,800.00	6,848.61	6,767.75	6,767.62	102.69	201.58	89.99	-1,783.16	4,632.91	1,427.64	1,140.28	287.36	4.968	
9,900.00	6,848.63	6,767.78	6,767.65	105.61	201.58	89.99	-1,783.16	4,632.91	1,378.60	1,085.48	293.12	4.703	
10,000.00	6,848.66	6,767.80	6,767.67	108.53	201.58	89.99	-1,783.16	4,632.91	1,335.26	1,036.31	298.95	4.466	
10,100.00	6,848.68	6,767.83	6,767.69	111.46	201.58	90.00	-1,783.16	4,632.91	1,298.19	993.46	304.74	4.260	
10,200.00	6,848.71	6,767.85	6,767.72	114.40	201.58	90.00	-1,783.16	4,632.91	1,267.95	957.61	310.33	4.086	
10,300.00	6,848.73	6,767.87	6,767.74	117.34	201.58	90.00	-1,783.16	4,632.91	1,245.02	929.43	315.58	3.945	
10,400.00	6,848.75	6,767.90	6,767.77	120.29	201.58	90.00	-1,783.16	4,632.91	1,229.82	909.49	320.33	3.839	
10,500.00	6,848.78	6,767.92	6,767.79	123.24	201.58	90.00	-1,783.16	4,632.91	1,222.63	898.20	324.43	3.769	
10,538.10	6,848.79	6,767.93	6,767.80	124.37	201.58	90.00	-1,783.16	4,632.91	1,222.04	896.24	325.80	3.751 CC	
10,600.00	6,848.80	6,767.95	6,767.82	126.20	201.58	90.00	-1,783.16	4,632.91	1,223.60	895.82	327.78	3.733 ES	
10,700.00	6,848.83	6,767.97	6,767.84	129.16	201.58	90.00	-1,783.16	4,632.91	1,232.72	902.41	330.31	3.732 SF	
10,800.00	6,848.85	6,767.99	6,767.86	132.12	201.58	90.00	-1,783.16	4,632.91	1,249.79	917.79	332.00	3.764	
10,900.00	6,848.88	6,768.02	6,767.89	135.08	201.59	90.00	-1,783.16	4,632.91	1,274.50	941.61	332.89	3.829	
11,000.00	6,848.90	6,768.04	6,767.91	138.05	201.59	90.01	-1,783.16	4,632.91	1,306.42	973.37	333.05	3.923	
11,100.00	6,848.92	6,768.07	6,767.94	141.02	201.59	90.01	-1,783.16	4,632.91	1,345.03	1,012.46	332.57	4.044	
11,200.00	6,848.95	6,768.09	6,767.96	144.00	201.59	90.01	-1,783.16	4,632.91	1,389.78	1,058.21	331.57	4.191	
11,300.00	6,848.97	6,768.12	6,767.98	146.97	201.59	90.01	-1,783.16	4,632.91	1,440.09	1,109.94	330.16	4.362	
11,400.00	6,849.00	6,768.14	6,768.01	149.95	201.59	90.01	-1,783.16	4,632.91	1,495.41	1,166.98	328.43	4.553	
11,500.00	6,849.02	6,768.16	6,768.03	152.93	201.59	90.01	-1,783.16	4,632.91	1,555.20	1,228.70	326.49	4.763	
11,600.00	6,849.04	6,768.19	6,768.06	155.91	201.59	90.01	-1,783.16	4,632.91	1,618.95	1,294.54	324.41	4.990	
11,700.00	6,849.07	6,768.21	6,768.08	158.90	201.59	90.01	-1,783.16	4,632.91	1,686.24	1,363.99	322.25	5.233	
11,800.00	6,849.09	6,768.24	6,768.11	161.88	201.59	90.01	-1,783.16	4,632.91	1,756.64	1,436.58	320.06	5.488	
11,900.00	6,849.12	6,768.26	6,768.13	164.87	201.59	90.02	-1,783.16	4,632.91	1,829.80	1,511.92	317.88	5.756	
12,000.00	6,849.14	6,768.29	6,768.15	167.86	201.59	90.02	-1,783.16	4,632.91	1,905.40	1,589.67	315.73	6.035	
12,100.00	6,849.17	6,768.31	6,768.18	170.85	201.59	90.02	-1,783.16	4,632.91	1,983.16	1,669.53	313.63	6.323	
12,200.00	6,849.19	6,768.33	6,768.20	173.84	201.60	90.02	-1,783.16	4,632.91	2,062.84	1,751.24	311.60	6.620	
12,300.00	6,849.21	6,768.36	6,768.23	176.84	201.60	90.02	-1,783.16	4,632.91	2,144.22	1,834.58	309.64	6.925	
12,400.00	6,849.24	6,768.38	6,768.25	179.83	201.60	90.02	-1,783.16	4,632.91	2,227.12	1,919.36	307.76	7.236	
12,500.00	6,849.26	6,768.41	6,768.28	182.83	201.60	90.02	-1,783.16	4,632.91	2,311.37	2,005.40	305.97	7.554	
12,600.00	6,849.29	6,768.43	6,768.30	185.82	201.60	90.02	-1,783.16	4,632.91	2,396.83	2,092.58	304.26	7.878	
12,700.00	6,849.31	6,768.45	6,768.32	188.82	201.60	90.02	-1,783.16	4,632.91	2,483.38	2,180.76	302.62	8.206	
12,800.00	6,849.34	6,768.48	6,768.35	191.82	201.60	90.03	-1,783.16	4,632.91	2,570.91	2,269.84	301.07	8.539	
12,900.00	6,849.36	6,768.50	6,768.37	194.82	201.60	90.03	-1,783.16	4,632.91	2,659.32	2,359.72	299.59	8.876	
13,000.00	6,849.38	6,768.53	6,768.40	197.82	201.60	90.03	-1,783.16	4,632.91	2,748.52	2,450.33	298.19	9.217	
13,100.00	6,849.41	6,768.55	6,768.42	200.83	201.60	90.03	-1,783.16	4,632.91	2,838.44	2,541.58	296.86	9.562	
13,200.00	6,849.43	6,768.58	6,768.44	203.83	201.60	90.03	-1,783.16	4,632.91	2,929.01	2,633.42	295.59	9.909	
13,300.00	6,849.46	6,768.60	6,768.47	206.83	201.60	90.03	-1,783.16	4,632.91	3,020.18	2,725.79	294.38	10.259	
13,400.00	6,849.48	6,768.62	6,768.49	209.84	201.60	90.03	-1,783.16	4,632.91	3,111.89	2,818.65	293.24	10.612	
13,500.00	6,849.50	6,768.65	6,768.52	212.84	201.60	90.03	-1,783.16	4,632.91	3,204.10	2,911.95	292.15	10.967	
13,600.00	6,849.53	6,768.67	6,768.54	215.85	201.61	90.03	-1,783.16	4,632.91	3,296.76	3,005.65	291.11	11.325	
13,700.00	6,849.55	6,768.70	6,768.57	218.86	201.61	90.04	-1,783.16	4,632.91	3,389.84	3,099.71	290.13	11.684	
13,800.00	6,849.58	6,768.72	6,768.59	221.87	201.61	90.04	-1,783.16	4,632.91	3,483.30	3,194.11	289.19	12.045	
13,900.00	6,849.60	6,768.75	6,768.61	224.87	201.61	90.04	-1,783.16	4,632.91	3,577.12	3,288.82	288.30	12.408	
14,000.00	6,849.63	6,768.77	6,768.64	227.88	201.61	90.04	-1,783.16	4,632.91	3,671.26	3,383.82	287.44	12.772	
14,100.00	6,849.65	6,768.79	6,768.66	230.89	201.61	90.04	-1,783.16	4,632.91	3,765.70	3,479.07	286.63	13.138	
14,200.00	6,849.67	6,768.82	6,768.69	233.90	201.61	90.04	-1,783.16	4,632.91	3,860.43	3,574.57	285.85	13.505	

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit 061M - OH - OH											Offset Site Error:	0.00 ft
Survey Program: 0-INCLINOMETER											Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis		Highside Toolface	Offset Wellbore Centre		Distance		Separation Factor	Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset		+N/-S	+E/-W	Between Centres	Between Ellipses		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)	
14,300.00	6,849.70	6,768.84	6,768.71	236.92	201.61	90.04	-1,783.16	4,632.91	3,955.41	3,670.30	285.11	13.873
14,400.00	6,849.72	6,768.87	6,768.74	239.93	201.61	90.04	-1,783.16	4,632.91	4,050.64	3,766.23	284.41	14.242
14,500.00	6,849.75	6,768.89	6,768.76	242.94	201.61	90.04	-1,783.16	4,632.91	4,146.09	3,862.36	283.73	14.613
14,600.00	6,849.77	6,768.91	6,768.78	245.95	201.61	90.05	-1,783.16	4,632.91	4,241.75	3,958.66	283.08	14.984
14,700.00	6,849.80	6,768.94	6,768.81	248.96	201.61	90.05	-1,783.16	4,632.91	4,337.60	4,055.14	282.46	15.356
14,800.00	6,849.82	6,768.96	6,768.83	251.98	201.61	90.05	-1,783.16	4,632.91	4,433.64	4,151.77	281.87	15.729
14,900.00	6,849.84	6,768.99	6,768.86	254.99	201.62	90.05	-1,783.16	4,632.91	4,529.85	4,248.55	281.30	16.103
15,000.00	6,849.87	6,769.01	6,768.88	258.01	201.62	90.05	-1,783.16	4,632.91	4,626.22	4,345.46	280.76	16.477
15,100.00	6,849.89	6,769.04	6,768.91	261.02	201.62	90.05	-1,783.16	4,632.91	4,722.75	4,442.51	280.24	16.853
15,200.00	6,849.92	6,769.06	6,768.93	264.04	201.62	90.05	-1,783.16	4,632.91	4,819.41	4,539.67	279.74	17.228
15,300.00	6,849.94	6,769.08	6,768.95	267.05	201.62	90.05	-1,783.16	4,632.91	4,916.21	4,636.95	279.26	17.604
15,400.00	6,849.97	6,769.11	6,768.98	270.07	201.62	90.06	-1,783.16	4,632.91	5,013.13	4,734.33	278.80	17.981
15,500.00	6,849.99	6,769.13	6,769.00	273.08	201.62	90.06	-1,783.16	4,632.91	5,110.17	4,831.81	278.36	18.358
15,600.00	6,850.01	6,769.16	6,769.03	276.10	201.62	90.06	-1,783.16	4,632.91	5,207.32	4,929.39	277.93	18.736
15,700.00	6,850.04	6,769.18	6,769.05	279.12	201.62	90.06	-1,783.16	4,632.91	5,304.58	5,027.06	277.52	19.114
15,800.00	6,850.06	6,769.21	6,769.07	282.14	201.62	90.06	-1,783.16	4,632.91	5,401.94	5,124.81	277.13	19.492
15,900.00	6,850.09	6,769.23	6,769.10	285.15	201.62	90.06	-1,783.16	4,632.91	5,499.40	5,222.64	276.75	19.871
16,000.00	6,850.11	6,769.25	6,769.12	288.17	201.62	90.06	-1,783.16	4,632.91	5,596.94	5,320.55	276.39	20.250
16,100.00	6,850.13	6,769.28	6,769.15	291.19	201.62	90.06	-1,783.16	4,632.91	5,694.57	5,418.53	276.04	20.629
16,200.00	6,850.16	6,769.30	6,769.17	294.21	201.62	90.06	-1,783.16	4,632.91	5,792.28	5,516.58	275.70	21.009
16,300.00	6,850.18	6,769.33	6,769.20	297.23	201.63	90.07	-1,783.16	4,632.91	5,890.07	5,614.69	275.38	21.389
16,400.00	6,850.21	6,769.35	6,769.22	300.25	201.63	90.07	-1,783.16	4,632.91	5,987.93	5,712.86	275.07	21.769
16,500.00	6,850.23	6,769.37	6,769.24	303.27	201.63	90.07	-1,783.16	4,632.91	6,085.86	5,811.09	274.77	22.149
16,600.00	6,850.26	6,769.40	6,769.27	306.28	201.63	90.07	-1,783.16	4,632.91	6,183.85	5,909.38	274.48	22.530
16,700.00	6,850.28	6,769.42	6,769.29	309.30	201.63	90.07	-1,783.16	4,632.91	6,281.91	6,007.71	274.20	22.910
16,800.00	6,850.30	6,769.45	6,769.32	312.32	201.63	90.07	-1,783.16	4,632.91	6,380.03	6,106.10	273.93	23.291
16,900.00	6,850.33	6,769.47	6,769.34	315.35	201.63	90.07	-1,783.16	4,632.91	6,478.21	6,204.54	273.67	23.672
17,000.00	6,850.35	6,769.50	6,769.37	318.37	201.63	90.07	-1,783.16	4,632.91	6,576.44	6,303.02	273.42	24.053
17,100.00	6,850.38	6,769.52	6,769.39	321.39	201.63	90.07	-1,783.16	4,632.91	6,674.72	6,401.55	273.18	24.434
17,200.00	6,850.40	6,769.54	6,769.41	324.41	201.63	90.08	-1,783.16	4,632.91	6,773.06	6,500.12	272.94	24.815
17,300.00	6,850.43	6,769.57	6,769.44	327.43	201.63	90.08	-1,783.16	4,632.91	6,871.44	6,598.72	272.72	25.196
17,400.00	6,850.45	6,769.59	6,769.46	330.45	201.63	90.08	-1,783.16	4,632.91	6,969.87	6,697.37	272.50	25.577
17,500.00	6,850.47	6,769.62	6,769.49	333.47	201.63	90.08	-1,783.16	4,632.91	7,068.34	6,796.05	272.29	25.959
17,600.00	6,850.50	6,769.64	6,769.51	336.49	201.63	90.08	-1,783.16	4,632.91	7,166.86	6,894.77	272.09	26.340
17,700.00	6,850.52	6,769.67	6,769.53	339.52	201.64	90.08	-1,783.16	4,632.91	7,265.41	6,993.52	271.89	26.722
17,800.00	6,850.55	6,769.69	6,769.56	342.54	201.64	90.08	-1,783.16	4,632.91	7,364.01	7,092.30	271.70	27.103
17,900.00	6,850.57	6,769.71	6,769.58	345.56	201.64	90.08	-1,783.16	4,632.91	7,462.64	7,191.12	271.52	27.484
18,000.00	6,850.59	6,769.74	6,769.61	348.58	201.64	90.08	-1,783.16	4,632.91	7,561.31	7,289.96	271.35	27.866
18,100.00	6,850.62	6,769.76	6,769.63	351.61	201.64	90.09	-1,783.16	4,632.91	7,660.01	7,388.83	271.18	28.247
18,200.00	6,850.64	6,769.79	6,769.66	354.63	201.64	90.09	-1,783.16	4,632.91	7,758.74	7,487.73	271.01	28.629
18,300.00	6,850.67	6,769.81	6,769.68	357.65	201.64	90.09	-1,783.16	4,632.91	7,857.51	7,586.66	270.86	29.010
18,400.00	6,850.69	6,769.84	6,769.70	360.67	201.64	90.09	-1,783.16	4,632.91	7,956.31	7,685.61	270.70	29.391
18,500.00	6,850.72	6,769.86	6,769.73	363.70	201.64	90.09	-1,783.16	4,632.91	8,055.14	7,784.58	270.56	29.773
18,600.00	6,850.74	6,769.88	6,769.75	366.72	201.64	90.09	-1,783.16	4,632.91	8,154.00	7,883.58	270.41	30.154
18,700.00	6,850.76	6,769.91	6,769.78	369.75	201.64	90.09	-1,783.16	4,632.91	8,252.88	7,982.60	270.28	30.535
18,800.00	6,850.79	6,769.93	6,769.80	372.77	201.64	90.09	-1,783.16	4,632.91	8,351.79	8,081.65	270.14	30.916
18,900.00	6,850.81	6,769.96	6,769.83	375.79	201.64	90.09	-1,783.16	4,632.91	8,450.73	8,180.71	270.02	31.297
19,000.00	6,850.84	6,769.98	6,769.85	378.82	201.65	90.10	-1,783.16	4,632.91	8,549.69	8,279.79	269.89	31.678
19,100.00	6,850.86	6,770.00	6,769.87	381.84	201.65	90.10	-1,783.16	4,632.91	8,648.67	8,378.90	269.78	32.059
19,200.00	6,850.89	6,770.03	6,769.90	384.87	201.65	90.10	-1,783.16	4,632.91	8,747.68	8,478.02	269.66	32.440
19,300.00	6,850.91	6,770.05	6,769.92	387.89	201.65	90.10	-1,783.16	4,632.91	8,846.71	8,577.16	269.55	32.820
19,400.00	6,850.93	6,770.08	6,769.95	390.91	201.65	90.10	-1,783.16	4,632.91	8,945.76	8,676.32	269.44	33.201

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit 061M - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 0-INCLINOMETER													Offset Well Error:	0.00 ft
Reference	Offset	Semi Major Axis		Distance		Rule Assigned:								
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
19,500.00	6,850.96	6,770.10	6,769.97	393.94	201.65	90.10	-1,783.16	4,632.91	9,044.84	8,775.49	269.34	33.581		
19,600.00	6,850.98	6,770.13	6,769.99	396.96	201.65	90.10	-1,783.16	4,632.91	9,143.93	8,874.69	269.24	33.962		
19,673.90	6,851.00	6,770.14	6,770.01	399.20	201.65	90.10	-1,783.16	4,632.91	9,217.17	8,948.00	269.17	34.243		
19,700.00	6,851.01	6,770.15	6,770.02	399.99	201.65	90.10	-1,783.16	4,632.91	9,243.04	8,973.89	269.15	34.342		
19,773.90	6,851.02	6,770.17	6,770.04	402.22	201.65	90.10	-1,783.16	4,632.91	9,316.30	9,047.22	269.08	34.623		



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit 061N - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 0-MWD													Offset Well Error:	0.00 ft
Reference	Offset	Semi Major Axis			Offset Wellbore Centre			Distance			Minimum Separation	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
0.00	0.00	2,986.01	2,797.33	0.00	18.55	102.35	-1,618.64	7,395.09	8,111.76					
100.00	100.00	3,023.42	2,832.18	0.30	18.82	102.37	-1,618.74	7,381.47	8,076.15	8,065.56	10.59	762.710		
200.00	200.00	3,071.87	2,877.43	0.66	19.16	102.40	-1,619.03	7,364.15	8,041.19	8,030.27	10.92	736.444		
300.00	300.00	3,139.67	2,940.78	1.01	19.64	102.44	-1,619.70	7,340.02	8,006.53	7,995.13	11.40	702.402		
400.00	400.00	3,227.31	3,022.78	1.37	20.25	102.50	-1,620.90	7,309.08	7,972.21	7,960.22	12.00	664.547		
500.00	500.00	3,271.32	3,063.94	1.73	20.56	102.54	-1,621.64	7,293.52	7,938.05	7,925.59	12.46	637.232		
600.00	599.98	3,305.01	3,095.55	2.08	20.79	-22.44	-1,622.45	7,281.93	7,903.17	7,890.28	12.89	612.922		
700.00	699.84	3,368.01	3,154.78	2.42	21.21	-22.71	-1,623.94	7,260.51	7,865.81	7,852.36	13.44	585.101		
800.00	799.45	3,432.01	3,215.07	2.77	21.64	-23.02	-1,625.30	7,239.08	7,825.88	7,811.88	14.00	559.161		
900.00	898.70	3,432.01	3,215.07	3.13	21.64	-23.39	-1,625.30	7,239.08	7,783.60	7,769.28	14.32	543.477		
963.97	961.95	3,472.81	3,253.64	3.37	21.90	-23.63	-1,626.11	7,225.80	7,755.31	7,740.63	14.68	528.415		
1,000.00	997.50	3,496.01	3,275.63	3.51	22.05	-23.63	-1,626.50	7,218.41	7,739.21	7,724.34	14.87	520.302		
1,100.00	1,096.19	3,517.71	3,296.24	3.90	22.18	-23.63	-1,626.84	7,211.61	7,694.90	7,679.64	15.26	504.159		
1,200.00	1,194.89	3,560.01	3,336.50	4.30	22.44	-23.62	-1,627.58	7,198.66	7,651.31	7,635.58	15.73	486.482		
1,300.00	1,293.58	3,584.98	3,360.32	4.70	22.59	-23.62	-1,628.06	7,191.18	7,608.35	7,592.21	16.14	471.380		
1,400.00	1,392.27	3,623.01	3,396.65	5.11	22.81	-23.61	-1,628.83	7,180.00	7,566.04	7,549.43	16.60	455.748		
1,500.00	1,490.96	3,623.01	3,396.65	5.52	22.81	-23.61	-1,628.83	7,180.00	7,524.59	7,507.64	16.94	444.089		
1,600.00	1,589.65	3,660.14	3,432.27	5.94	23.01	-23.61	-1,629.73	7,169.52	7,483.79	7,466.38	17.41	429.917		
1,700.00	1,688.34	3,687.01	3,458.15	6.36	23.16	-23.60	-1,630.53	7,162.36	7,444.02	7,426.18	17.84	417.207		
1,800.00	1,787.03	3,687.01	3,458.15	6.78	23.16	-23.60	-1,630.53	7,162.36	7,405.15	7,386.96	18.20	406.962		
1,900.00	1,885.73	3,687.01	3,458.15	7.20	23.16	-23.60	-1,630.53	7,162.36	7,367.43	7,348.88	18.55	397.115		
2,000.00	1,984.42	3,720.62	3,490.71	7.62	23.32	-23.60	-1,631.62	7,154.07	7,330.34	7,311.34	19.01	385.620		
2,100.00	2,083.11	3,751.01	3,520.33	8.04	23.46	-23.60	-1,632.61	7,147.37	7,294.61	7,275.15	19.46	374.881		
2,200.00	2,181.80	3,751.01	3,520.33	8.46	23.46	-23.60	-1,632.61	7,147.37	7,259.63	7,239.81	19.82	366.267		
2,300.00	2,280.49	3,776.64	3,545.41	8.89	23.56	-23.59	-1,633.43	7,142.12	7,225.74	7,205.49	20.25	356.773		
2,400.00	2,379.18	3,815.01	3,583.00	9.31	23.71	-23.59	-1,634.53	7,134.57	7,192.64	7,171.92	20.72	347.119		
2,500.00	2,477.87	3,815.01	3,583.00	9.74	23.71	-23.59	-1,634.53	7,134.57	7,160.51	7,139.43	21.09	339.580		
2,600.00	2,576.56	3,878.01	3,645.01	10.16	23.94	-23.60	-1,635.78	7,123.52	7,129.27	7,107.67	21.61	329.933		
2,700.00	2,675.26	3,878.01	3,645.01	10.59	23.94	-23.60	-1,635.78	7,123.52	7,098.83	7,076.86	21.97	323.041		
2,800.00	2,773.95	3,909.92	3,676.55	11.02	24.04	-23.60	-1,636.05	7,118.62	7,069.46	7,047.05	22.41	315.437		
2,900.00	2,872.64	4,059.68	3,824.70	11.44	24.49	-23.66	-1,634.52	7,096.88	7,040.73	7,017.64	23.09	304.944		
3,000.00	2,971.33	4,181.87	3,945.37	11.87	24.88	-23.71	-1,632.58	7,077.70	7,010.49	6,986.78	23.71	295.660		
3,100.00	3,070.02	4,201.01	3,964.28	12.30	24.94	-23.72	-1,632.38	7,074.77	6,980.94	6,956.81	24.12	289.385		
3,200.00	3,168.71	4,233.01	3,995.93	12.73	25.04	-23.73	-1,632.16	7,070.11	6,952.26	6,927.69	24.56	283.052		
3,300.00	3,267.40	4,265.01	4,027.64	13.16	25.13	-23.74	-1,632.01	7,065.83	6,924.56	6,899.57	25.00	276.997		
3,400.00	3,366.10	4,280.13	4,042.66	13.58	25.17	-23.75	-1,631.99	7,063.99	6,897.92	6,872.52	25.40	271.578		
3,500.00	3,464.79	4,297.01	4,059.42	14.01	25.21	-23.75	-1,632.02	7,062.09	6,872.38	6,846.57	25.80	266.342		
3,600.00	3,563.48	4,316.92	4,079.23	14.44	25.25	-23.76	-1,632.10	7,060.06	6,847.93	6,821.72	26.21	261.278		
3,700.00	3,662.17	4,334.01	4,096.25	14.87	25.29	-23.77	-1,632.17	7,058.53	6,824.61	6,798.00	26.61	256.476		
3,800.00	3,760.86	4,334.01	4,096.25	15.30	25.29	-23.77	-1,632.17	7,058.53	6,802.57	6,775.59	26.97	252.199		
3,900.00	3,859.55	4,387.01	4,149.15	15.73	25.38	-23.79	-1,632.34	7,055.25	6,781.71	6,754.27	27.43	247.223		
4,000.00	3,958.24	4,387.01	4,149.15	16.16	25.38	-23.79	-1,632.34	7,055.25	6,761.71	6,733.92	27.79	243.303		
4,100.00	4,056.94	4,387.01	4,149.15	16.59	25.38	-23.79	-1,632.34	7,055.25	6,743.14	6,715.00	28.15	239.563		
4,200.00	4,155.63	4,529.01	4,291.04	17.02	25.57	-23.86	-1,632.72	7,049.65	6,724.42	6,695.65	28.78	233.689		
4,300.00	4,254.32	4,621.83	4,383.79	17.45	25.69	-23.90	-1,632.96	7,046.09	6,705.98	6,676.67	29.31	228.803		
4,400.00	4,353.01	4,714.68	4,476.57	17.88	25.82	-23.95	-1,633.19	7,042.60	6,687.61	6,657.77	29.84	224.090		
4,500.00	4,451.70	4,807.55	4,569.38	18.30	25.94	-23.99	-1,633.42	7,039.19	6,669.33	6,638.95	30.38	219.541		
4,600.00	4,550.39	4,900.44	4,662.21	18.73	26.06	-24.04	-1,633.65	7,035.85	6,651.13	6,620.21	30.91	215.148		
4,700.00	4,649.08	4,993.36	4,755.07	19.16	26.18	-24.09	-1,633.86	7,032.59	6,633.01	6,601.56	31.45	210.904		
4,800.00	4,747.77	5,086.31	4,847.96	19.59	26.31	-24.13	-1,634.08	7,029.40	6,614.97	6,582.99	31.99	206.802		
4,900.00	4,846.47	5,179.28	4,940.88	20.02	26.43	-24.18	-1,634.29	7,026.29	6,597.02	6,564.50	32.52	202.834		
5,000.00	4,945.16	5,272.27	5,033.83	20.45	26.55	-24.23	-1,634.49	7,023.25	6,579.15	6,546.09	33.06	198.995		

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
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Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit 061N - OH - OH												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (ft)	Separation Factor	Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)			
5,100.00	5,043.85	5,365.29	5,126.80	20.88	26.68	-24.27	-1,634.69	7,020.29	6,561.36	6,527.76	33.60	195.278	
5,200.00	5,142.54	5,458.34	5,219.80	21.31	26.80	-24.32	-1,634.88	7,017.40	6,543.66	6,509.52	34.14	191.677	
5,300.00	5,241.23	5,551.40	5,312.82	21.74	26.92	-24.37	-1,635.07	7,014.59	6,526.04	6,491.36	34.68	188.189	
5,400.00	5,339.92	5,644.50	5,405.87	22.17	27.05	-24.42	-1,635.26	7,011.86	6,508.50	6,473.29	35.22	184.807	
5,500.00	5,438.61	5,737.61	5,498.95	22.61	27.17	-24.47	-1,635.44	7,009.20	6,491.05	6,455.29	35.76	181.527	
5,600.00	5,537.31	5,830.75	5,592.06	23.04	27.29	-24.52	-1,635.61	7,006.61	6,473.68	6,437.38	36.30	178.345	
5,700.00	5,636.00	5,923.92	5,685.19	23.47	27.42	-24.57	-1,635.78	7,004.10	6,456.39	6,419.55	36.84	175.256	
5,800.00	5,734.69	6,017.10	5,778.34	23.90	27.54	-24.62	-1,635.94	7,001.67	6,439.19	6,401.81	37.38	172.257	
5,900.00	5,833.38	6,110.31	5,871.52	24.33	27.66	-24.67	-1,636.10	6,999.32	6,422.07	6,384.15	37.92	169.344	
6,000.00	5,932.07	6,203.55	5,964.73	24.76	27.79	-24.73	-1,636.25	6,997.04	6,405.04	6,366.57	38.47	166.513	
6,100.00	6,030.76	6,296.81	6,057.96	25.19	27.91	-24.78	-1,636.40	6,994.83	6,388.09	6,349.08	39.01	163.761	
6,200.00	6,129.45	6,390.09	6,151.22	25.62	28.03	-24.83	-1,636.54	6,992.70	6,371.22	6,331.67	39.55	161.085	
6,300.00	6,228.15	6,483.39	6,244.50	26.05	28.16	-24.88	-1,636.68	6,990.65	6,354.44	6,314.34	40.10	158.482	
6,370.81	6,298.03	6,549.47	6,310.57	26.35	28.25	-24.92	-1,636.78	6,989.24	6,342.61	6,302.13	40.48	156.682	
6,400.00	6,326.74	6,576.62	6,337.70	26.48	28.28	-17.37	-1,636.81	6,988.68	6,337.09	6,296.45	40.64	155.929	
6,450.00	6,375.33	6,622.49	6,383.57	26.73	28.34	-9.62	-1,636.88	6,987.73	6,324.69	6,283.77	40.92	154.578	
6,500.00	6,422.93	6,667.37	6,428.44	26.99	28.40	-5.02	-1,636.94	6,986.83	6,308.60	6,267.41	41.19	153.159	
6,550.00	6,469.25	6,710.96	6,472.02	27.29	28.46	-1.89	-1,637.00	6,985.97	6,288.93	6,247.47	41.46	151.692	
6,600.00	6,513.99	6,753.01	6,514.06	27.61	28.51	0.47	-1,637.05	6,985.15	6,265.80	6,224.08	41.72	150.190	
6,650.00	6,556.88	6,793.26	6,554.31	27.96	28.57	2.42	-1,637.10	6,984.39	6,239.34	6,197.37	41.97	148.665	
6,700.00	6,597.66	6,831.47	6,592.50	28.34	28.62	4.19	-1,637.15	6,983.67	6,209.72	6,167.52	42.21	147.130	
6,750.00	6,636.07	6,867.39	6,628.42	28.76	28.67	5.90	-1,637.19	6,983.01	6,177.13	6,134.70	42.43	145.595	
6,800.00	6,671.88	6,900.81	6,661.83	29.21	28.71	7.68	-1,637.23	6,982.41	6,141.75	6,099.12	42.63	144.071	
6,850.00	6,704.87	6,931.52	6,692.54	29.71	28.75	9.65	-1,637.27	6,981.86	6,103.81	6,061.00	42.81	142.566	
6,900.00	6,734.84	6,959.34	6,720.35	30.25	28.79	11.95	-1,637.30	6,981.38	6,063.55	6,020.57	42.98	141.088	
6,950.00	6,761.59	6,984.08	6,745.09	30.85	28.82	14.77	-1,637.33	6,980.95	6,021.19	5,978.07	43.12	139.643	
7,000.00	6,784.97	7,005.60	6,766.61	31.50	28.85	18.40	-1,637.36	6,980.58	5,977.02	5,933.78	43.24	138.237	
7,050.00	6,804.83	7,023.76	6,784.76	32.20	28.87	23.31	-1,637.38	6,980.28	5,931.29	5,887.96	43.33	136.873	
7,100.00	6,821.05	7,038.44	6,799.45	32.96	28.89	30.29	-1,637.39	6,980.03	5,884.30	5,840.89	43.41	135.555	
7,150.00	6,833.53	7,049.55	6,810.56	33.77	28.91	40.65	-1,637.41	6,979.84	5,836.34	5,792.87	43.46	134.283	
7,200.00	6,842.18	7,057.03	6,818.03	34.62	28.92	56.24	-1,637.41	6,979.72	5,787.69	5,744.19	43.50	133.059	
7,250.00	6,846.97	7,060.80	6,821.80	35.52	28.92	77.74	-1,637.42	6,979.66	5,738.66	5,695.15	43.51	131.883	
7,286.15	6,848.00	7,061.22	6,822.22	36.18	28.92	94.75	-1,637.42	6,979.65	5,703.15	5,659.64	43.52	131.061	
7,300.00	6,848.00	7,061.00	6,822.00	36.44	28.92	94.74	-1,637.42	6,979.66	5,689.56	5,646.04	43.51	130.750	
7,400.00	6,848.03	7,059.45	6,820.45	38.40	28.92	94.66	-1,637.42	6,979.68	5,591.42	5,547.90	43.52	128.478	
7,500.00	6,848.05	7,057.90	6,818.90	40.49	28.92	94.58	-1,637.42	6,979.71	5,493.36	5,449.81	43.55	126.152	
7,600.00	6,848.08	7,056.34	6,817.34	42.70	28.92	94.49	-1,637.41	6,979.73	5,395.36	5,351.77	43.59	123.770	
7,700.00	6,848.10	7,054.78	6,815.78	45.01	28.91	94.41	-1,637.41	6,979.76	5,297.44	5,253.78	43.66	121.330	
7,800.00	6,848.12	7,053.22	6,814.22	47.40	28.91	94.33	-1,637.41	6,979.78	5,199.60	5,155.84	43.76	118.830	
7,900.00	6,848.15	7,051.65	6,812.66	49.86	28.91	94.25	-1,637.41	6,979.81	5,101.84	5,057.96	43.88	116.267	
8,000.00	6,848.17	7,050.09	6,811.09	52.39	28.91	94.16	-1,637.41	6,979.84	5,004.17	4,960.13	44.04	113.641	
8,100.00	6,848.20	7,048.52	6,809.52	54.96	28.91	94.08	-1,637.41	6,979.86	4,906.59	4,862.37	44.22	110.949	
8,200.00	6,848.22	7,046.95	6,807.95	57.58	28.90	94.00	-1,637.40	6,979.89	4,809.11	4,764.66	44.45	108.193	
8,300.00	6,848.25	7,045.37	6,806.37	60.24	28.90	93.92	-1,637.40	6,979.91	4,711.74	4,667.02	44.72	105.370	
8,400.00	6,848.27	7,043.79	6,804.80	62.94	28.90	93.83	-1,637.40	6,979.94	4,614.48	4,569.45	45.03	102.483	
8,500.00	6,848.29	7,042.21	6,803.22	65.66	28.90	93.75	-1,637.40	6,979.97	4,517.33	4,471.95	45.39	99.533	
8,600.00	6,848.32	7,040.63	6,801.63	68.42	28.90	93.67	-1,637.40	6,979.99	4,420.32	4,374.52	45.80	96.521	
8,700.00	6,848.34	7,039.04	6,800.05	71.19	28.89	93.58	-1,637.39	6,980.02	4,323.44	4,277.17	46.26	93.452	
8,800.00	6,848.37	7,037.45	6,798.46	73.99	28.89	93.50	-1,637.39	6,980.05	4,226.70	4,179.91	46.79	90.329	
8,900.00	6,848.39	7,035.86	6,796.87	76.80	28.89	93.41	-1,637.39	6,980.07	4,130.12	4,082.73	47.39	87.157	
9,000.00	6,848.42	7,034.27	6,795.27	79.63	28.89	93.33	-1,637.39	6,980.10	4,033.70	3,985.65	48.05	83.943	
9,100.00	6,848.44	7,032.67	6,793.68	82.47	28.89	93.25	-1,637.39	6,980.13	3,937.47	3,888.67	48.80	80.694	

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit 061N - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 0-MWD													Offset Well Error:	0.00 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
9,200.00	6,848.46	7,031.07	6,792.08	85.33	28.88	93.16	-1,637.39	6,980.15	3,841.42	3,791.80	49.62	77.417		
9,300.00	6,848.49	7,029.47	6,790.48	88.20	28.88	93.08	-1,637.38	6,980.18	3,745.58	3,695.05	50.53	74.121		
9,400.00	6,848.51	7,027.87	6,788.87	91.08	28.88	92.99	-1,637.38	6,980.21	3,649.96	3,598.42	51.54	70.815		
9,500.00	6,848.54	7,026.26	6,787.26	93.97	28.88	92.91	-1,637.38	6,980.23	3,554.59	3,501.93	52.65	67.510		
9,600.00	6,848.56	7,024.65	6,785.65	96.87	28.87	92.82	-1,637.38	6,980.26	3,459.47	3,405.60	53.87	64.215		
9,700.00	6,848.58	7,023.03	6,784.04	99.77	28.87	92.74	-1,637.38	6,980.29	3,364.64	3,309.43	55.21	60.942		
9,800.00	6,848.61	7,021.42	6,782.43	102.69	28.87	92.65	-1,637.37	6,980.31	3,270.11	3,213.44	56.67	57.700		
9,900.00	6,848.63	7,019.80	6,780.81	105.61	28.87	92.57	-1,637.37	6,980.34	3,175.92	3,117.65	58.27	54.500		
10,000.00	6,848.66	7,018.18	6,779.19	108.53	28.87	92.48	-1,637.37	6,980.37	3,082.09	3,022.07	60.02	51.353		
10,100.00	6,848.68	7,016.55	6,777.56	111.46	28.86	92.39	-1,637.37	6,980.40	2,988.66	2,926.74	61.92	48.267		
10,200.00	6,848.71	7,014.93	6,775.93	114.40	28.86	92.31	-1,637.37	6,980.42	2,895.67	2,831.69	63.99	45.252		
10,300.00	6,848.73	7,013.30	6,774.30	117.34	28.86	92.22	-1,637.37	6,980.45	2,803.17	2,736.93	66.24	42.317		
10,400.00	6,848.75	7,011.66	6,772.67	120.29	28.86	92.13	-1,637.36	6,980.48	2,711.19	2,642.50	68.69	39.470		
10,500.00	6,848.78	7,010.03	6,771.04	123.24	28.86	92.05	-1,637.36	6,980.51	2,619.80	2,548.45	71.35	36.717		
10,600.00	6,848.80	7,008.39	6,769.40	126.20	28.85	91.96	-1,637.36	6,980.54	2,529.06	2,454.82	74.24	34.065		
10,700.00	6,848.83	7,006.75	6,767.76	129.16	28.85	91.87	-1,637.36	6,980.56	2,439.05	2,361.66	77.38	31.518		
10,800.00	6,848.85	7,005.10	6,766.11	132.12	28.85	91.79	-1,637.36	6,980.59	2,349.84	2,269.04	80.80	29.083		
10,900.00	6,848.88	7,003.46	6,764.47	135.08	28.85	91.70	-1,637.35	6,980.62	2,261.53	2,177.02	84.50	26.762		
11,000.00	6,848.90	7,001.81	6,762.82	138.05	28.84	91.61	-1,637.35	6,980.65	2,174.23	2,085.70	88.53	24.559		
11,100.00	6,848.92	7,000.16	6,761.17	141.02	28.84	91.53	-1,637.35	6,980.68	2,088.07	1,995.17	92.90	22.475		
11,200.00	6,848.95	6,998.50	6,759.51	144.00	28.84	91.44	-1,637.35	6,980.70	2,003.20	1,905.55	97.65	20.513		
11,300.00	6,848.97	6,996.84	6,757.85	146.97	28.84	91.35	-1,637.35	6,980.73	1,919.78	1,816.97	102.81	18.673		
11,400.00	6,849.00	6,995.18	6,756.19	149.95	28.84	91.26	-1,637.34	6,980.76	1,838.02	1,729.62	108.40	16.956		
11,500.00	6,849.02	6,993.52	6,754.53	152.93	28.83	91.17	-1,637.34	6,980.79	1,758.14	1,643.68	114.46	15.360		
11,600.00	6,849.04	6,991.85	6,752.86	155.91	28.83	91.09	-1,637.34	6,980.82	1,680.42	1,559.41	121.01	13.887		
11,700.00	6,849.07	6,990.18	6,751.19	158.90	28.83	91.00	-1,637.34	6,980.85	1,605.16	1,477.09	128.07	12.534		
11,800.00	6,849.09	6,988.51	6,749.52	161.88	28.83	90.91	-1,637.34	6,980.87	1,532.73	1,397.08	135.65	11.299		
11,900.00	6,849.12	6,986.83	6,747.84	164.87	28.82	90.82	-1,637.34	6,980.90	1,463.56	1,319.81	143.74	10.182		
12,000.00	6,849.14	6,985.15	6,746.16	167.86	28.82	90.73	-1,637.33	6,980.93	1,398.11	1,245.79	152.32	9.179		
12,100.00	6,849.17	6,983.47	6,744.48	170.85	28.82	90.64	-1,637.33	6,980.96	1,336.95	1,175.64	161.31	8.288		
12,200.00	6,849.19	6,981.79	6,742.80	173.84	28.82	90.55	-1,637.33	6,980.99	1,280.68	1,110.08	170.60	7.507		
12,300.00	6,849.21	6,980.10	6,741.11	176.84	28.82	90.46	-1,637.33	6,981.02	1,229.97	1,049.95	180.02	6.832		
12,400.00	6,849.24	6,978.41	6,739.42	179.83	28.81	90.37	-1,637.33	6,981.05	1,185.55	996.19	189.36	6.261		
12,500.00	6,849.26	6,976.71	6,737.73	182.83	28.81	90.28	-1,637.32	6,981.08	1,148.14	949.83	198.31	5.790		
12,600.00	6,849.29	6,975.02	6,736.03	185.82	28.81	90.19	-1,637.32	6,981.11	1,118.44	911.90	206.54	5.415		
12,700.00	6,849.31	6,973.32	6,734.33	188.82	28.81	90.10	-1,637.32	6,981.14	1,097.08	883.38	213.70	5.134		
12,800.00	6,849.34	6,971.62	6,732.63	191.82	28.80	90.01	-1,637.32	6,981.16	1,084.55	865.10	219.45	4.942		
12,886.68	6,849.36	6,970.14	6,731.15	194.42	28.80	89.94	-1,637.32	6,981.19	1,081.08	857.97	223.12	4.845 CC		
12,900.00	6,849.36	6,969.91	6,730.92	194.82	28.80	89.92	-1,637.32	6,981.19	1,081.17	857.61	223.56	4.836 ES		
13,000.00	6,849.38	6,968.20	6,729.22	197.82	28.80	89.83	-1,637.31	6,981.22	1,087.01	861.13	225.87	4.812 SF		
13,100.00	6,849.41	6,966.49	6,727.51	200.83	28.80	89.74	-1,637.31	6,981.25	1,101.92	875.53	226.40	4.867		
13,200.00	6,849.43	6,964.78	6,725.79	203.83	28.80	89.65	-1,637.31	6,981.28	1,125.56	900.30	225.26	4.997		
13,300.00	6,849.46	6,963.06	6,724.07	206.83	28.79	89.56	-1,637.31	6,981.31	1,157.38	934.70	222.68	5.197		
13,400.00	6,849.48	6,961.34	6,722.35	209.84	28.79	89.47	-1,637.31	6,981.34	1,196.73	977.78	218.96	5.466		
13,500.00	6,849.50	6,959.61	6,720.63	212.84	28.79	89.38	-1,637.30	6,981.37	1,242.90	1,028.52	214.38	5.798		
13,600.00	6,849.53	6,957.89	6,718.90	215.85	28.79	89.29	-1,637.30	6,981.40	1,295.15	1,085.93	209.22	6.190		
13,700.00	6,849.55	6,956.16	6,717.17	218.86	28.78	89.19	-1,637.30	6,981.43	1,352.79	1,149.06	203.73	6.640		
13,800.00	6,849.58	6,954.43	6,715.44	221.87	28.78	89.10	-1,637.30	6,981.46	1,415.15	1,217.06	198.09	7.144		
13,900.00	6,849.60	6,952.69	6,713.71	224.87	28.78	89.01	-1,637.30	6,981.49	1,481.64	1,289.18	192.46	7.699		
14,000.00	6,849.63	6,950.95	6,711.97	227.88	28.78	88.92	-1,637.29	6,981.52	1,551.73	1,364.80	186.93	8.301		
14,100.00	6,849.65	6,949.21	6,710.23	230.89	28.77	88.83	-1,637.29	6,981.55	1,624.95	1,443.37	181.58	8.949		
14,200.00	6,849.67	6,947.46	6,708.48	233.90	28.77	88.73	-1,637.29	6,981.58	1,700.90	1,524.44	176.46	9.639		

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit 061N - OH - OH												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Distance Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
14,300.00	6,849.70	6,945.71	6,706.73	236.92	28.77	88.64	-1,637.29	6,981.62	1,779.22	1,607.63	171.59	10.369	
14,400.00	6,849.72	6,943.96	6,704.98	239.93	28.77	88.55	-1,637.29	6,981.65	1,859.63	1,692.65	166.98	11.137	
14,500.00	6,849.75	6,942.21	6,703.23	242.94	28.77	88.46	-1,637.28	6,981.68	1,941.85	1,779.22	162.64	11.940	
14,600.00	6,849.77	6,940.45	6,701.47	245.95	28.76	88.36	-1,637.28	6,981.71	2,025.67	1,867.12	158.55	12.776	
14,700.00	6,849.80	6,938.69	6,699.71	248.96	28.76	88.27	-1,637.28	6,981.74	2,110.90	1,956.19	154.71	13.644	
14,800.00	6,849.82	6,936.93	6,697.95	251.98	28.76	88.18	-1,637.28	6,981.77	2,197.38	2,046.26	151.11	14.541	
14,900.00	6,849.84	6,935.16	6,696.18	254.99	28.76	88.08	-1,637.27	6,981.80	2,284.95	2,137.21	147.74	15.466	
15,000.00	6,849.87	6,933.39	6,694.41	258.01	28.75	87.99	-1,637.27	6,981.83	2,373.51	2,228.93	144.58	16.417	
15,100.00	6,849.89	6,931.62	6,692.64	261.02	28.75	87.90	-1,637.27	6,981.86	2,462.94	2,321.33	141.61	17.392	
15,200.00	6,849.92	6,929.84	6,690.86	264.04	28.75	87.80	-1,637.27	6,981.89	2,553.16	2,414.33	138.83	18.391	
15,300.00	6,849.94	6,928.06	6,689.08	267.05	28.75	87.71	-1,637.27	6,981.93	2,644.08	2,507.86	136.21	19.412	
15,400.00	6,849.97	6,926.28	6,687.30	270.07	28.74	87.61	-1,637.26	6,981.96	2,735.63	2,601.87	133.75	20.453	
15,500.00	6,849.99	6,924.49	6,685.51	273.08	28.74	87.52	-1,637.26	6,981.99	2,827.75	2,696.30	131.44	21.513	
15,600.00	6,850.01	6,922.70	6,683.72	276.10	28.74	87.42	-1,637.26	6,982.02	2,920.39	2,791.12	129.27	22.592	
15,700.00	6,850.04	6,920.91	6,681.93	279.12	28.74	87.33	-1,637.26	6,982.05	3,013.50	2,886.28	127.22	23.687	
15,800.00	6,850.06	6,919.11	6,680.13	282.14	28.73	87.23	-1,637.26	6,982.08	3,107.03	2,981.75	125.29	24.799	
15,900.00	6,850.09	6,917.31	6,678.33	285.15	28.73	87.14	-1,637.25	6,982.12	3,200.96	3,077.50	123.46	25.927	
16,000.00	6,850.11	6,915.51	6,676.53	288.17	28.73	87.04	-1,637.25	6,982.15	3,295.24	3,173.50	121.74	27.069	
16,100.00	6,850.13	6,913.70	6,674.73	291.19	28.73	86.95	-1,637.25	6,982.18	3,389.85	3,269.75	120.11	28.224	
16,200.00	6,850.16	6,911.89	6,672.92	294.21	28.73	86.85	-1,637.25	6,982.21	3,484.76	3,366.20	118.56	29.392	
16,300.00	6,850.18	6,910.08	6,671.10	297.23	28.72	86.75	-1,637.25	6,982.24	3,579.95	3,462.85	117.10	30.573	
16,400.00	6,850.21	6,908.27	6,669.29	300.25	28.72	86.66	-1,637.24	6,982.28	3,675.39	3,559.68	115.71	31.765	
16,500.00	6,850.23	6,906.45	6,667.47	303.27	28.72	86.56	-1,637.24	6,982.31	3,771.06	3,656.67	114.39	32.967	
16,600.00	6,850.26	6,904.62	6,665.65	306.28	28.72	86.47	-1,637.24	6,982.34	3,866.96	3,753.82	113.13	34.180	
16,700.00	6,850.28	6,902.80	6,663.82	309.30	28.71	86.37	-1,637.24	6,982.37	3,963.05	3,851.11	111.94	35.403	
16,800.00	6,850.30	6,900.97	6,661.99	312.32	28.71	86.28	-1,637.23	6,982.41	4,059.34	3,948.53	110.81	36.634	
16,900.00	6,850.33	6,899.14	6,660.16	315.35	28.71	86.18	-1,637.23	6,982.44	4,155.80	4,046.07	109.73	37.874	
17,000.00	6,850.35	6,897.30	6,658.33	318.37	28.71	86.08	-1,637.23	6,982.47	4,252.42	4,143.72	108.69	39.123	
17,100.00	6,850.38	6,895.46	6,656.49	321.39	28.70	85.98	-1,637.23	6,982.51	4,349.19	4,241.48	107.71	40.378	
17,200.00	6,850.40	6,893.62	6,654.65	324.41	28.70	85.89	-1,637.23	6,982.54	4,446.11	4,339.34	106.77	41.641	
17,300.00	6,850.43	6,891.77	6,652.80	327.43	28.70	85.79	-1,637.22	6,982.57	4,543.15	4,437.28	105.87	42.911	
17,400.00	6,850.45	6,889.92	6,650.95	330.45	28.70	85.69	-1,637.22	6,982.61	4,640.33	4,535.31	105.01	44.187	
17,500.00	6,850.47	6,888.07	6,649.10	333.47	28.69	85.60	-1,637.22	6,982.64	4,737.62	4,633.42	104.19	45.469	
17,600.00	6,850.50	6,886.22	6,647.24	336.49	28.69	85.50	-1,637.22	6,982.67	4,835.02	4,731.61	103.41	46.757	
17,700.00	6,850.52	6,884.36	6,645.38	339.52	28.69	85.40	-1,637.21	6,982.71	4,932.52	4,829.87	102.65	48.050	
17,800.00	6,850.55	6,882.49	6,643.52	342.54	28.69	85.30	-1,637.21	6,982.74	5,030.12	4,928.19	101.93	49.348	
17,900.00	6,850.57	6,880.63	6,641.66	345.56	28.68	85.20	-1,637.21	6,982.77	5,127.82	5,026.58	101.24	50.651	
18,000.00	6,850.59	6,878.76	6,639.79	348.58	28.68	85.10	-1,637.21	6,982.81	5,225.59	5,125.02	100.57	51.958	
18,100.00	6,850.62	6,876.88	6,637.91	351.61	28.68	85.01	-1,637.21	6,982.84	5,323.46	5,223.52	99.93	53.269	
18,200.00	6,850.64	6,875.01	6,636.04	354.63	28.68	84.91	-1,637.20	6,982.88	5,421.39	5,322.07	99.32	54.584	
18,300.00	6,850.67	6,873.13	6,634.16	357.65	28.67	84.81	-1,637.20	6,982.91	5,519.41	5,420.67	98.73	55.903	
18,400.00	6,850.69	6,871.24	6,632.27	360.67	28.67	84.71	-1,637.20	6,982.94	5,617.49	5,519.32	98.17	57.225	
18,500.00	6,850.72	6,869.36	6,630.39	363.70	28.67	84.61	-1,637.20	6,982.98	5,715.63	5,618.01	97.62	58.550	
18,600.00	6,850.74	6,867.47	6,628.50	366.72	28.67	84.51	-1,637.19	6,983.01	5,813.84	5,716.75	97.10	59.877	
18,700.00	6,850.76	6,865.57	6,626.60	369.75	28.66	84.41	-1,637.19	6,983.05	5,912.11	5,815.52	96.59	61.208	
18,800.00	6,850.79	6,863.67	6,624.71	372.77	28.66	84.31	-1,637.19	6,983.08	6,010.44	5,914.34	96.10	62.541	
18,900.00	6,850.81	6,861.77	6,622.81	375.79	28.66	84.21	-1,637.19	6,983.12	6,108.82	6,013.18	95.64	63.876	
19,000.00	6,850.84	6,859.87	6,620.90	378.82	28.66	84.11	-1,637.18	6,983.15	6,207.25	6,112.07	95.18	65.213	
19,100.00	6,850.86	6,857.96	6,618.99	381.84	28.65	84.01	-1,637.18	6,983.19	6,305.73	6,210.98	94.75	66.552	
19,200.00	6,850.89	6,856.05	6,617.08	384.87	28.65	83.91	-1,637.18	6,983.22	6,404.26	6,309.93	94.33	67.893	
19,300.00	6,850.91	6,854.13	6,615.17	387.89	28.65	83.81	-1,637.18	6,983.26	6,502.83	6,408.90	93.92	69.235	
19,400.00	6,850.93	6,852.21	6,613.25	390.91	28.65	83.71	-1,637.17	6,983.29	6,601.44	6,507.91	93.53	70.578	

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit 061N - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 0-MWD													Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Rule Assigned:				Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
19,500.00	6,850.96	6,850.29	6,611.33	393.94	28.64	83.61	-1,637.17	6,983.33	6,700.09	6,606.94	93.16	71.923		
19,600.00	6,850.98	6,848.37	6,609.40	396.96	28.64	83.51	-1,637.17	6,983.36	6,798.79	6,705.99	92.79	73.269		
19,673.90	6,851.00	6,846.94	6,607.97	399.20	28.64	83.44	-1,637.17	6,983.39	6,871.74	6,779.21	92.53	74.265		
19,700.00	6,851.01	6,846.44	6,607.47	399.99	28.64	83.41	-1,637.17	6,983.40	6,897.51	6,805.07	92.44	74.617		
19,773.90	6,851.02	6,845.01	6,606.04	402.22	28.64	83.33	-1,637.17	6,983.42	6,970.50	6,878.31	92.19	75.613		



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit 125S - Lateral - Lateral														Offset Site Error:	0.00 ft
Survey Program: 100-MWD, 2973-MWD														Offset Well Error:	0.00 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Semi Major Axis Offset	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Distance Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning		
0.00	0.00	5,482.01	2,840.62	0.00	52.85	88.50	52.08	1,983.06	3,471.28						
100.00	100.00	5,482.01	2,840.62	0.30	52.85	88.50	52.08	1,983.06	3,389.70	3,353.42	36.28	93.425			
200.00	200.00	5,482.01	2,840.62	0.66	52.85	88.50	52.08	1,983.06	3,309.13	3,272.24	36.89	89.698			
300.00	300.00	5,482.01	2,840.62	1.01	52.85	88.50	52.08	1,983.06	3,229.65	3,192.09	37.56	85.993			
400.00	400.00	5,482.01	2,840.62	1.37	52.85	88.50	52.08	1,983.06	3,151.34	3,113.06	38.28	82.323			
500.00	500.00	5,482.01	2,840.62	1.73	52.85	88.50	52.08	1,983.06	3,074.28	3,035.22	39.06	78.703			
600.00	599.98	5,482.01	2,840.62	2.08	52.85	-37.66	52.08	1,983.06	2,997.66	2,957.77	39.90	75.134			
700.00	699.84	5,482.01	2,840.62	2.42	52.85	-39.16	52.08	1,983.06	2,920.65	2,879.88	40.77	71.641			
800.00	799.45	5,482.01	2,840.62	2.77	52.85	-40.72	52.08	1,983.06	2,843.29	2,801.63	41.66	68.254			
900.00	898.70	5,482.01	2,840.62	3.13	52.85	-42.35	52.08	1,983.06	2,765.67	2,723.10	42.57	64.975			
963.97	961.95	5,481.37	2,840.61	3.37	52.84	-43.41	51.44	1,983.09	2,715.91	2,672.75	43.15	62.940			
1,000.00	997.50	5,478.10	2,840.59	3.51	52.78	-43.30	48.18	1,983.24	2,687.96	2,644.51	43.44	61.872			
1,100.00	1,096.19	5,469.03	2,840.53	3.90	52.62	-43.00	39.12	1,983.64	2,611.39	2,567.12	44.27	58.986			
1,200.00	1,194.89	5,459.96	2,840.46	4.30	52.46	-42.70	30.06	1,984.03	2,536.43	2,491.28	45.15	56.184			
1,300.00	1,293.58	5,450.90	2,840.40	4.70	52.30	-42.40	21.00	1,984.43	2,463.21	2,417.14	46.06	53.474			
1,400.00	1,392.27	5,441.83	2,840.34	5.11	52.13	-42.09	11.94	1,984.83	2,391.89	2,344.87	47.02	50.866			
1,500.00	1,490.96	5,432.76	2,840.27	5.52	51.97	-41.79	2.88	1,985.23	2,322.66	2,274.64	48.02	48.367			
1,600.00	1,589.65	5,423.69	2,840.21	5.94	51.81	-41.49	-6.18	1,985.63	2,255.70	2,206.65	49.05	45.985			
1,700.00	1,688.34	5,414.62	2,840.15	6.36	51.65	-41.18	-15.24	1,986.03	2,191.22	2,141.11	50.11	43.726			
1,800.00	1,787.03	5,376.93	2,839.75	6.78	50.98	-39.92	-52.90	1,987.50	2,129.41	2,078.65	50.76	41.951			
1,900.00	1,885.73	5,348.83	2,838.99	7.20	50.49	-38.97	-80.97	1,988.45	2,070.43	2,018.88	51.55	40.160			
2,000.00	1,984.42	5,333.01	2,838.36	7.62	50.21	-38.44	-96.77	1,988.96	2,014.63	1,962.10	52.53	38.350			
2,100.00	2,083.11	5,333.01	2,838.36	8.04	50.21	-38.44	-96.77	1,988.96	1,962.32	1,908.57	53.75	36.510			
2,200.00	2,181.80	5,333.01	2,838.36	8.46	50.21	-38.44	-96.77	1,988.96	1,913.81	1,858.87	54.94	34.835			
2,300.00	2,280.49	5,333.01	2,838.36	8.89	50.21	-38.44	-96.77	1,988.96	1,869.39	1,813.30	56.09	33.328			
2,400.00	2,379.18	5,333.01	2,838.36	9.31	50.21	-38.44	-96.77	1,988.96	1,829.37	1,772.18	57.18	31.991			
2,500.00	2,477.87	5,333.01	2,838.36	9.74	50.21	-38.44	-96.77	1,988.96	1,794.03	1,735.84	58.19	30.828			
2,600.00	2,576.56	5,333.01	2,838.36	10.16	50.21	-38.44	-96.77	1,988.96	1,763.66	1,704.56	59.10	29.841			
2,700.00	2,675.26	5,333.01	2,838.36	10.59	50.21	-38.44	-96.77	1,988.96	1,738.53	1,678.64	59.89	29.031			
2,800.00	2,773.95	5,314.30	2,837.58	11.02	49.89	-37.81	-115.46	1,989.67	1,718.61	1,658.40	60.22	28.541			
2,900.00	2,872.64	5,311.74	2,837.48	11.44	49.85	-37.72	-118.01	1,989.79	1,704.52	1,643.86	60.65	28.104			
3,000.00	2,971.33	5,309.12	2,837.37	11.87	49.80	-37.63	-120.63	1,989.91	1,696.20	1,635.29	60.91	27.847			
3,091.67	3,061.80	5,306.65	2,837.28	12.26	49.76	-37.55	-123.09	1,990.04	1,693.72	1,632.73	60.99	27.770 CC, ES, SF			
3,100.00	3,070.02	5,306.43	2,837.27	12.30	49.76	-37.54	-123.31	1,990.05	1,693.74	1,632.75	60.99	27.771			
3,200.00	3,168.71	5,303.66	2,837.16	12.73	49.71	-37.45	-126.07	1,990.19	1,697.18	1,636.29	60.88	27.876			
3,300.00	3,267.40	5,300.83	2,837.05	13.16	49.66	-37.35	-128.90	1,990.34	1,706.47	1,645.87	60.60	28.161			
3,400.00	3,366.10	5,297.92	2,836.95	13.58	49.61	-37.25	-131.80	1,990.51	1,721.51	1,661.37	60.14	28.624			
3,500.00	3,464.79	5,294.92	2,836.84	14.01	49.56	-37.15	-134.79	1,990.68	1,742.17	1,682.64	59.53	29.266			
3,600.00	3,563.48	5,291.85	2,836.72	14.44	49.51	-37.05	-137.85	1,990.87	1,768.23	1,709.45	58.78	30.082			
3,700.00	3,662.17	5,288.69	2,836.61	14.87	49.45	-36.94	-141.01	1,991.07	1,799.47	1,741.56	57.92	31.071			
3,800.00	3,760.86	5,285.44	2,836.50	15.30	49.40	-36.83	-144.25	1,991.28	1,835.63	1,778.67	56.96	32.228			
3,900.00	3,859.55	5,269.01	2,835.96	15.73	49.12	-36.28	-160.62	1,992.47	1,876.50	1,820.76	55.74	33.664			
4,000.00	3,958.24	5,269.01	2,835.96	16.16	49.12	-36.28	-160.62	1,992.47	1,921.57	1,866.85	54.71	35.121			
4,100.00	4,056.94	5,269.01	2,835.96	16.59	49.12	-36.28	-160.62	1,992.47	1,970.68	1,917.03	53.65	36.732			
4,200.00	4,155.63	5,275.44	2,836.16	17.02	49.23	-36.50	-154.21	1,991.96	2,023.55	1,970.89	52.65	38.431			
4,300.00	4,254.32	5,265.54	2,835.85	17.45	49.06	-36.16	-164.08	1,992.75	2,079.89	2,028.44	51.45	40.427			
4,400.00	4,353.01	5,255.41	2,835.54	17.88	48.88	-35.82	-174.18	1,993.54	2,139.39	2,089.13	50.26	42.569			
4,500.00	4,451.70	5,245.04	2,835.23	18.30	48.71	-35.47	-184.51	1,994.33	2,201.79	2,152.70	49.09	44.852			
4,600.00	4,550.39	5,234.42	2,834.93	18.73	48.53	-35.12	-195.10	1,995.14	2,266.86	2,218.90	47.96	47.270			
4,700.00	4,649.08	5,030.21	2,837.67	19.16	44.98	-28.34	-398.81	2,007.14	2,333.95	2,289.36	44.59	52.348			
4,800.00	4,747.77	5,014.01	2,838.54	19.59	44.69	-27.81	-414.98	2,007.80	2,402.73	2,359.20	43.53	55.203			
4,900.00	4,846.47	5,014.01	2,838.54	20.02	44.69	-27.81	-414.98	2,007.80	2,473.60	2,430.90	42.70	57.927			

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit 125S - Lateral - Lateral													Offset Site Error:	0.00 ft
Survey Program: 100-MWD, 2973-MWD													Offset Well Error:	0.00 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Semi Major Axis Offset	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Distance Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
5,000.00	4,945.16	4,997.92	2,839.30	20.45	44.40	-27.29	-431.04	2,008.39	2,546.32	2,504.59	41.74	61.010		
5,100.00	5,043.85	4,991.26	2,839.56	20.88	44.29	-27.07	-437.69	2,008.61	2,620.84	2,579.91	40.92	64.043		
5,200.00	5,142.54	4,985.04	2,839.79	21.31	44.18	-26.87	-443.91	2,008.80	2,696.97	2,656.81	40.16	67.156		
5,300.00	5,241.23	4,979.21	2,839.97	21.74	44.07	-26.68	-449.73	2,008.98	2,774.59	2,735.15	39.44	70.343		
5,400.00	5,339.92	4,973.73	2,840.12	22.17	43.97	-26.50	-455.20	2,009.13	2,853.58	2,814.81	38.78	73.593		
5,500.00	5,438.61	4,968.58	2,840.25	22.61	43.88	-26.33	-460.35	2,009.27	2,933.83	2,895.68	38.15	76.899		
5,600.00	5,537.31	4,950.01	2,840.55	23.04	43.55	-25.73	-478.91	2,009.70	3,015.32	2,977.88	37.43	80.555		
5,700.00	5,636.00	4,950.01	2,840.55	23.47	43.55	-25.73	-478.91	2,009.70	3,097.76	3,060.81	36.94	83.853		
5,800.00	5,734.69	4,950.01	2,840.55	23.90	43.55	-25.73	-478.91	2,009.70	3,181.20	3,144.71	36.49	87.180		
5,900.00	5,833.38	4,952.47	2,840.52	24.33	43.59	-25.81	-476.45	2,009.65	3,265.58	3,229.49	36.10	90.470		
6,000.00	5,932.07	4,938.85	2,840.65	24.76	43.35	-25.37	-490.07	2,009.91	3,350.81	3,315.22	35.58	94.174		
6,100.00	6,030.76	4,925.51	2,840.78	25.19	43.12	-24.94	-503.41	2,010.12	3,436.79	3,401.68	35.10	97.900		
6,200.00	6,129.45	4,912.46	2,840.89	25.62	42.88	-24.51	-516.45	2,010.27	3,523.47	3,488.80	34.67	101.642		
6,300.00	6,228.15	4,899.69	2,840.99	26.05	42.66	-24.10	-529.23	2,010.37	3,610.80	3,576.54	34.26	105.392		
6,370.81	6,298.03	4,890.80	2,841.05	26.35	42.50	-23.82	-538.11	2,010.42	3,673.01	3,639.01	33.99	108.048		
6,400.00	6,326.74	4,887.19	2,841.08	26.48	42.44	-17.12	-541.73	2,010.43	3,698.42	3,664.54	33.88	109.160		
6,450.00	6,375.33	4,886.01	2,841.09	26.73	42.41	-10.74	-542.90	2,010.43	3,740.51	3,706.80	33.71	110.953		
6,500.00	6,422.93	4,886.01	2,841.09	26.99	42.41	-7.34	-542.90	2,010.43	3,780.61	3,747.08	33.53	112.742		
6,550.00	6,469.25	4,886.01	2,841.09	27.29	42.41	-5.32	-542.90	2,010.43	3,818.54	3,785.20	33.34	114.544		
6,600.00	6,513.99	4,886.01	2,841.09	27.61	42.41	-4.02	-542.90	2,010.43	3,854.14	3,821.01	33.12	116.351		
6,650.00	6,556.88	4,886.01	2,841.09	27.96	42.41	-3.13	-542.90	2,010.43	3,887.25	3,854.35	32.90	118.154		
6,700.00	6,597.66	4,886.01	2,841.09	28.34	42.41	-2.49	-542.90	2,010.43	3,917.74	3,885.07	32.66	119.941		
6,750.00	6,636.07	4,886.01	2,841.09	28.76	42.41	-2.03	-542.90	2,010.43	3,945.48	3,913.06	32.42	121.703		
6,800.00	6,671.88	4,869.55	2,841.16	29.21	42.12	-1.40	-559.36	2,010.45	3,970.28	3,938.25	32.03	123.961		
6,850.00	6,704.87	4,868.08	2,841.16	29.71	42.10	-1.11	-560.84	2,010.45	3,992.19	3,960.42	31.76	125.692		
6,900.00	6,734.84	4,866.77	2,841.16	30.25	42.08	-0.88	-562.15	2,010.45	4,011.04	3,979.55	31.49	127.357		
6,950.00	6,761.59	4,865.62	2,841.16	30.85	42.06	-0.69	-563.29	2,010.45	4,026.78	3,995.55	31.23	128.942		
7,000.00	6,784.97	4,864.64	2,841.16	31.50	42.04	-0.54	-564.27	2,010.44	4,039.34	4,008.38	30.97	130.431		
7,050.00	6,804.83	4,863.84	2,841.16	32.20	42.02	-0.41	-565.08	2,010.44	4,048.68	4,017.97	30.72	131.811		
7,100.00	6,821.05	4,863.20	2,841.16	32.96	42.01	-0.30	-565.71	2,010.44	4,054.76	4,024.29	30.47	133.067		
7,110.63	6,824.02	4,863.09	2,841.16	33.13	42.01	-0.28	-565.82	2,010.44	4,055.63	4,025.21	30.42	133.316		
7,150.00	6,833.53	4,862.74	2,841.16	33.77	42.00	-0.21	-566.17	2,010.44	4,057.55	4,027.32	30.24	134.183		
7,189.50	6,840.69	4,862.49	2,841.16	34.44	42.00	-0.14	-566.42	2,010.44	4,057.43	4,027.37	30.06	134.959		
7,200.00	6,842.18	4,862.45	2,841.16	34.62	42.00	-0.12	-566.47	2,010.44	4,057.06	4,027.04	30.02	135.148		
7,240.37	6,846.35	4,862.33	2,841.16	35.34	42.00	-0.06	-566.58	2,010.44	4,054.25	4,024.40	29.85	135.809		
7,250.00	6,846.97	4,862.32	2,841.16	35.52	42.00	-0.05	-566.59	2,010.44	4,053.27	4,023.45	29.81	135.950		
7,279.64	6,847.97	4,862.33	2,841.16	36.06	42.00	-0.01	-566.59	2,010.44	4,049.47	4,019.77	29.70	136.342		
7,286.15	6,848.00	4,862.34	2,841.16	36.18	42.00	0.00	-566.58	2,010.44	4,048.49	4,018.81	29.68	136.419		
7,297.57	6,848.00	4,862.36	2,841.16	36.40	42.00	0.00	-566.56	2,010.44	4,046.72	4,017.09	29.64	136.549		
7,300.00	6,848.00	4,862.36	2,841.16	36.44	42.00	0.00	-566.55	2,010.44	4,046.35	4,016.72	29.63	136.577		
7,381.81	6,848.02	4,862.49	2,841.16	38.04	42.00	0.00	-566.42	2,010.44	4,034.68	4,005.32	29.36	137.414		
7,400.00	6,848.03	4,862.52	2,841.16	38.40	42.00	0.00	-566.39	2,010.44	4,032.31	4,003.00	29.31	137.582		
7,481.17	6,848.05	4,862.65	2,841.16	40.09	42.00	0.00	-566.26	2,010.44	4,022.70	3,993.58	29.13	138.117		
7,500.00	6,848.05	4,862.68	2,841.16	40.49	42.00	-0.01	-566.23	2,010.44	4,020.71	3,991.62	29.09	138.217		
7,580.52	6,848.07	4,862.81	2,841.16	42.27	42.01	-0.01	-566.11	2,010.44	4,013.15	3,984.16	28.99	138.422		
7,600.00	6,848.08	4,862.84	2,841.16	42.70	42.01	-0.01	-566.08	2,010.44	4,011.56	3,982.59	28.98	138.444		
7,679.87	6,848.10	4,862.96	2,841.16	44.54	42.01	-0.01	-565.96	2,010.44	4,006.04	3,977.07	28.97	138.303		
7,700.00	6,848.10	4,862.99	2,841.16	45.01	42.01	-0.01	-565.93	2,010.44	4,004.90	3,975.93	28.97	138.237		
7,779.20	6,848.12	4,863.11	2,841.16	46.90	42.01	-0.01	-565.80	2,010.44	4,001.38	3,972.33	29.05	137.751		
7,800.00	6,848.12	4,863.14	2,841.16	47.40	42.01	-0.01	-565.77	2,010.44	4,000.72	3,971.64	29.08	137.591		
7,878.34	6,848.14	4,863.26	2,841.16	49.33	42.01	-0.01	-565.66	2,010.44	3,999.19	3,969.95	29.24	136.776		
7,900.00	6,848.15	4,863.29	2,841.16	49.86	42.01	-0.01	-565.62	2,010.44	3,999.04	3,969.75	29.29	136.518		

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit 125S - Lateral - Lateral													Offset Site Error:	0.00 ft
Survey Program: 100-MWD, 2973-MWD													Offset Well Error:	0.00 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Semi Major Axis Offset	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Distance Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
8,000.00	6,848.17	4,863.44	2,841.16	52.39	42.02	-0.02	-565.48	2,010.44	3,999.86	3,970.24	29.62	135.047		
8,100.00	6,848.20	4,863.58	2,841.16	54.96	42.02	-0.02	-565.33	2,010.44	4,003.18	3,973.13	30.05	133.226		
8,200.00	6,848.22	4,863.73	2,841.16	57.58	42.02	-0.02	-565.19	2,010.44	4,008.99	3,978.41	30.58	131.110		
8,300.00	6,848.25	4,863.87	2,841.16	60.24	42.02	-0.02	-565.05	2,010.44	4,017.28	3,986.08	31.20	128.764		
8,400.00	6,848.27	4,864.01	2,841.16	62.94	42.03	-0.02	-564.91	2,010.44	4,028.04	3,996.14	31.90	126.253		
8,500.00	6,848.29	4,864.15	2,841.16	65.66	42.03	-0.03	-564.77	2,010.44	4,041.25	4,008.56	32.69	123.640		
8,600.00	6,848.32	4,864.28	2,841.16	68.42	42.03	-0.03	-564.63	2,010.44	4,056.87	4,023.34	33.53	120.983		
8,700.00	6,848.34	4,864.42	2,841.16	71.19	42.03	-0.03	-564.50	2,010.44	4,074.90	4,040.46	34.44	118.332		
8,800.00	6,848.37	4,864.55	2,841.16	73.99	42.04	-0.03	-564.37	2,010.44	4,095.28	4,059.90	35.39	115.728		
8,900.00	6,848.39	4,864.68	2,841.16	76.80	42.04	-0.03	-564.23	2,010.44	4,118.00	4,081.62	36.38	113.204		
9,000.00	6,848.42	4,864.81	2,841.16	79.63	42.04	-0.04	-564.11	2,010.44	4,143.00	4,105.60	37.40	110.785		
9,100.00	6,848.44	4,864.94	2,841.16	82.47	42.04	-0.04	-563.98	2,010.44	4,170.25	4,131.81	38.44	108.489		
9,200.00	6,848.46	4,865.06	2,841.16	85.33	42.05	-0.04	-563.85	2,010.44	4,199.71	4,160.21	39.50	106.329		
9,300.00	6,848.49	4,865.19	2,841.16	88.20	42.05	-0.04	-563.73	2,010.44	4,231.33	4,190.76	40.56	104.310		
9,400.00	6,848.51	4,865.31	2,841.16	91.08	42.05	-0.04	-563.61	2,010.44	4,265.05	4,223.42	41.64	102.436		
9,500.00	6,848.54	4,865.43	2,841.16	93.97	42.05	-0.04	-563.48	2,010.45	4,300.84	4,258.14	42.71	100.707		
9,600.00	6,848.56	4,865.55	2,841.16	96.87	42.05	-0.05	-563.37	2,010.45	4,338.64	4,294.87	43.77	99.122		
9,700.00	6,848.58	4,865.67	2,841.16	99.77	42.06	-0.05	-563.25	2,010.45	4,378.40	4,333.57	44.83	97.675		
9,800.00	6,848.61	4,865.78	2,841.16	102.69	42.06	-0.05	-563.13	2,010.45	4,420.06	4,374.19	45.87	96.362		
9,900.00	6,848.63	4,865.90	2,841.16	105.61	42.06	-0.05	-563.02	2,010.45	4,463.57	4,416.67	46.90	95.178		
10,000.00	6,848.66	4,866.01	2,841.16	108.53	42.06	-0.05	-562.90	2,010.45	4,508.88	4,460.98	47.91	94.117		
10,100.00	6,848.68	4,866.13	2,841.16	111.46	42.06	-0.05	-562.79	2,010.45	4,555.94	4,507.04	48.90	93.172		
10,200.00	6,848.71	4,866.24	2,841.16	114.40	42.07	-0.06	-562.68	2,010.45	4,604.69	4,554.82	49.87	92.337		
10,300.00	6,848.73	4,866.35	2,841.16	117.34	42.07	-0.06	-562.57	2,010.45	4,655.07	4,604.26	50.82	91.605		
10,400.00	6,848.75	4,866.46	2,841.09	120.29	42.41	-0.34	-542.90	2,010.43	4,707.15	4,655.26	51.89	90.716		
10,500.00	6,848.78	4,866.57	2,841.09	123.24	42.41	-0.34	-542.90	2,010.43	4,760.65	4,707.86	52.79	90.177		
10,600.00	6,848.80	4,866.68	2,841.09	126.20	42.41	-0.34	-542.90	2,010.43	4,815.64	4,761.97	53.67	89.724		
10,700.00	6,848.83	4,866.79	2,841.09	129.16	42.41	-0.34	-542.90	2,010.43	4,872.06	4,817.53	54.53	89.352		
10,800.00	6,848.85	4,866.90	2,841.09	132.12	42.41	-0.34	-542.90	2,010.43	4,929.86	4,874.50	55.36	89.055		
10,900.00	6,848.88	4,867.01	2,841.09	135.08	42.41	-0.34	-542.90	2,010.43	4,988.99	4,932.83	56.16	88.830		
11,000.00	6,848.90	4,867.12	2,841.09	138.05	42.41	-0.34	-542.90	2,010.43	5,049.41	4,992.47	56.95	88.672		
11,100.00	6,848.92	4,867.23	2,841.09	141.02	42.41	-0.34	-542.90	2,010.43	5,111.08	5,053.38	57.70	88.576		
11,200.00	6,848.95	4,867.34	2,841.09	144.00	42.41	-0.34	-542.90	2,010.43	5,173.94	5,115.51	58.44	88.539		
11,300.00	6,848.97	4,867.45	2,841.09	146.97	42.41	-0.34	-542.90	2,010.43	5,237.96	5,178.81	59.15	88.557		
11,400.00	6,849.00	4,867.56	2,841.09	149.95	42.41	-0.34	-542.90	2,010.43	5,303.09	5,243.26	59.84	88.626		
11,500.00	6,849.02	4,867.67	2,841.09	152.93	42.41	-0.34	-542.90	2,010.43	5,369.30	5,308.79	60.50	88.745		
11,600.00	6,849.04	4,867.78	2,841.09	155.91	42.41	-0.34	-542.90	2,010.43	5,436.53	5,375.39	61.15	88.909		
11,700.00	6,849.07	4,867.89	2,841.09	158.90	42.41	-0.34	-542.90	2,010.43	5,504.77	5,443.00	61.77	89.117		
11,800.00	6,849.09	4,868.00	2,841.09	161.88	42.41	-0.34	-542.90	2,010.43	5,573.96	5,511.58	62.37	89.365		
11,900.00	6,849.12	4,868.11	2,841.09	164.87	42.41	-0.34	-542.90	2,010.43	5,644.07	5,581.12	62.96	89.651		
12,000.00	6,849.14	4,868.22	2,841.09	167.86	42.41	-0.34	-542.90	2,010.43	5,715.08	5,651.56	63.52	89.973		
12,100.00	6,849.17	4,868.33	2,841.09	170.85	42.41	-0.34	-542.90	2,010.43	5,786.94	5,722.87	64.07	90.329		
12,200.00	6,849.19	4,868.44	2,841.09	173.84	42.41	-0.34	-542.90	2,010.43	5,859.62	5,795.03	64.59	90.716		
12,300.00	6,849.21	4,868.55	2,841.09	176.84	42.41	-0.34	-542.90	2,010.43	5,933.11	5,868.00	65.10	91.134		
12,400.00	6,849.24	4,868.66	2,841.09	179.83	42.41	-0.34	-542.90	2,010.43	6,007.35	5,941.76	65.60	91.580		
12,500.00	6,849.26	4,868.77	2,841.09	182.83	42.41	-0.34	-542.90	2,010.43	6,082.34	6,016.27	66.07	92.054		
12,600.00	6,849.29	4,868.88	2,841.09	185.82	42.41	-0.34	-542.90	2,010.43	6,158.04	6,091.50	66.54	92.552		
12,700.00	6,849.31	4,868.99	2,841.09	188.82	42.41	-0.34	-542.90	2,010.43	6,234.42	6,167.43	66.98	93.074		
12,800.00	6,849.34	4,869.10	2,841.09	191.82	42.41	-0.34	-542.90	2,010.43	6,311.46	6,244.04	67.42	93.619		
12,900.00	6,849.36	4,869.21	2,841.09	194.82	42.41	-0.34	-542.90	2,010.43	6,389.14	6,321.30	67.84	94.186		
13,000.00	6,849.38	4,869.32	2,841.09	197.82	42.41	-0.34	-542.90	2,010.43	6,467.43	6,399.19	68.24	94.773		
13,100.00	6,849.41	4,869.43	2,841.09	200.83	42.41	-0.34	-542.90	2,010.43	6,546.31	6,477.67	68.64	95.378		

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit 125S - Lateral - Lateral													Offset Site Error:	0.00 ft
Survey Program: 100-MWD, 2973-MWD													Offset Well Error:	0.00 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Semi Major Axis Offset	Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (ft)	Separation Factor	Warning	
				(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
13,200.00	6,849.43	4,886.01	2,841.09	203.83	42.41	-0.34	-542.90	2,010.43	6,625.76	6,556.74	69.02	96.003		
13,300.00	6,849.46	4,886.01	2,841.09	206.83	42.41	-0.34	-542.90	2,010.43	6,705.76	6,636.38	69.39	96.644		
13,400.00	6,849.48	4,886.01	2,841.09	209.84	42.41	-0.34	-542.90	2,010.43	6,786.30	6,716.55	69.74	97.302		
13,500.00	6,849.50	4,886.01	2,841.09	212.84	42.41	-0.34	-542.90	2,010.43	6,867.34	6,797.25	70.09	97.975		
13,600.00	6,849.53	4,886.01	2,841.09	215.85	42.41	-0.34	-542.90	2,010.43	6,948.88	6,878.45	70.43	98.663		
13,700.00	6,849.55	4,886.01	2,841.09	218.86	42.41	-0.34	-542.90	2,010.43	7,030.89	6,960.14	70.76	99.364		
13,800.00	6,849.58	4,886.01	2,841.09	221.87	42.41	-0.34	-542.90	2,010.43	7,113.37	7,042.29	71.08	100.079		
13,900.00	6,849.60	4,886.01	2,841.09	224.87	42.41	-0.34	-542.90	2,010.43	7,196.29	7,124.90	71.39	100.807		
14,000.00	6,849.63	4,886.01	2,841.09	227.88	42.41	-0.34	-542.90	2,010.43	7,279.64	7,207.95	71.69	101.546		
14,100.00	6,849.65	4,886.01	2,841.09	230.89	42.41	-0.34	-542.90	2,010.43	7,363.40	7,291.42	71.98	102.297		
14,200.00	6,849.67	4,886.01	2,841.09	233.90	42.41	-0.34	-542.90	2,010.43	7,447.57	7,375.30	72.27	103.058		
14,300.00	6,849.70	4,886.01	2,841.09	236.92	42.41	-0.34	-542.90	2,010.43	7,532.12	7,459.57	72.54	103.829		
14,400.00	6,849.72	4,886.01	2,841.09	239.93	42.41	-0.34	-542.90	2,010.43	7,617.04	7,544.23	72.81	104.611		
14,500.00	6,849.75	4,886.01	2,841.09	242.94	42.41	-0.34	-542.90	2,010.43	7,702.33	7,629.25	73.08	105.401		
14,600.00	6,849.77	4,886.01	2,841.09	245.95	42.41	-0.34	-542.90	2,010.43	7,787.97	7,714.63	73.33	106.200		
14,700.00	6,849.80	4,886.01	2,841.09	248.96	42.41	-0.34	-542.90	2,010.43	7,873.94	7,800.36	73.58	107.007		
14,800.00	6,849.82	4,886.01	2,841.09	251.98	42.41	-0.34	-542.90	2,010.43	7,960.25	7,886.42	73.83	107.823		
14,900.00	6,849.84	4,886.01	2,841.09	254.99	42.41	-0.34	-542.90	2,010.43	8,046.87	7,972.80	74.07	108.645		
15,000.00	6,849.87	4,886.01	2,841.09	258.01	42.41	-0.34	-542.90	2,010.43	8,133.80	8,059.50	74.30	109.475		
15,100.00	6,849.89	4,886.01	2,841.09	261.02	42.41	-0.34	-542.90	2,010.43	8,221.02	8,146.50	74.53	110.311		
15,200.00	6,849.92	4,886.01	2,841.09	264.04	42.41	-0.34	-542.90	2,010.43	8,308.53	8,233.79	74.75	111.154		
15,300.00	6,849.94	4,886.01	2,841.09	267.05	42.41	-0.34	-542.90	2,010.43	8,396.33	8,321.36	74.97	112.003		
15,400.00	6,849.97	4,886.01	2,841.09	270.07	42.41	-0.34	-542.90	2,010.43	8,484.39	8,409.21	75.18	112.857		
15,500.00	6,849.99	4,886.01	2,841.09	273.08	42.41	-0.34	-542.90	2,010.43	8,572.71	8,497.33	75.39	113.717		
15,600.00	6,850.01	4,886.01	2,841.09	276.10	42.41	-0.34	-542.90	2,010.43	8,661.29	8,585.70	75.59	114.582		
15,700.00	6,850.04	4,886.01	2,841.09	279.12	42.41	-0.34	-542.90	2,010.43	8,750.11	8,674.32	75.79	115.452		
15,800.00	6,850.06	4,886.01	2,841.09	282.14	42.41	-0.34	-542.90	2,010.43	8,839.18	8,763.19	75.99	116.327		
15,900.00	6,850.09	4,886.01	2,841.09	285.15	42.41	-0.34	-542.90	2,010.43	8,928.47	8,852.29	76.18	117.206		
16,000.00	6,850.11	4,886.01	2,841.09	288.17	42.41	-0.34	-542.90	2,010.43	9,017.99	8,941.62	76.37	118.089		
16,100.00	6,850.13	4,886.01	2,841.09	291.19	42.41	-0.34	-542.90	2,010.43	9,107.73	9,031.18	76.55	118.975		
16,200.00	6,850.16	4,886.01	2,841.09	294.21	42.41	-0.34	-542.90	2,010.43	9,197.68	9,120.94	76.73	119.866		
16,300.00	6,850.18	4,886.01	2,841.09	297.23	42.41	-0.34	-542.90	2,010.43	9,287.83	9,210.92	76.91	120.760		
16,400.00	6,850.21	4,886.01	2,841.09	300.25	42.41	-0.34	-542.90	2,010.43	9,378.19	9,301.10	77.09	121.657		
16,500.00	6,850.23	4,886.01	2,841.09	303.27	42.41	-0.34	-542.90	2,010.43	9,468.73	9,391.47	77.26	122.558		
16,600.00	6,850.26	4,886.01	2,841.09	306.28	42.41	-0.34	-542.90	2,010.43	9,559.47	9,482.04	77.43	123.461		
16,700.00	6,850.28	4,886.01	2,841.09	309.30	42.41	-0.34	-542.90	2,010.43	9,650.39	9,572.79	77.60	124.367		
16,800.00	6,850.30	4,886.01	2,841.09	312.32	42.41	-0.34	-542.90	2,010.43	9,741.49	9,663.73	77.76	125.275		
16,900.00	6,850.33	4,886.01	2,841.09	315.35	42.41	-0.34	-542.90	2,010.43	9,832.76	9,754.83	77.92	126.186		
17,000.00	6,850.35	4,886.01	2,841.09	318.37	42.41	-0.34	-542.90	2,010.43	9,924.20	9,846.11	78.08	127.099		
17,100.00	6,850.38	4,886.01	2,841.09	321.39	42.41	-0.34	-542.90	2,010.43	10,015.80	9,937.56	78.24	128.014		
17,200.00	6,850.40	4,886.01	2,841.09	324.41	42.41	-0.34	-542.90	2,010.43	10,107.56	10,029.17	78.40	128.931		
17,300.00	6,850.43	4,886.01	2,841.09	327.43	42.41	-0.34	-542.90	2,010.43	10,199.48	10,120.93	78.55	129.850		
17,400.00	6,850.45	4,886.01	2,841.09	330.45	42.41	-0.34	-542.90	2,010.43	10,291.54	10,212.84	78.70	130.770		
17,500.00	6,850.47	4,886.01	2,841.09	333.47	42.41	-0.34	-542.90	2,010.43	10,383.76	10,304.91	78.85	131.692		
17,600.00	6,850.50	4,886.01	2,841.09	336.49	42.41	-0.34	-542.90	2,010.43	10,476.11	10,397.12	79.00	132.615		
17,700.00	6,850.52	4,886.01	2,841.09	339.52	42.41	-0.34	-542.90	2,010.43	10,568.61	10,489.47	79.14	133.540		
17,800.00	6,850.55	4,886.01	2,841.09	342.54	42.41	-0.34	-542.90	2,010.43	10,661.24	10,581.96	79.29	134.466		
17,900.00	6,850.57	4,886.01	2,841.09	345.56	42.41	-0.34	-542.90	2,010.43	10,754.01	10,674.58	79.43	135.392		
18,000.00	6,850.59	4,886.01	2,841.09	348.58	42.41	-0.34	-542.90	2,010.43	10,846.90	10,767.33	79.57	136.320		
18,100.00	6,850.62	4,886.01	2,841.09	351.61	42.41	-0.34	-542.90	2,010.43	10,939.92	10,860.21	79.71	137.249		
18,200.00	6,850.64	4,886.01	2,841.09	354.63	42.41	-0.34	-542.90	2,010.43	11,033.05	10,953.21	79.85	138.178		
18,300.00	6,850.67	4,886.01	2,841.09	357.65	42.41	-0.34	-542.90	2,010.43	11,126.31	11,046.33	79.98	139.108		

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit 125S - Lateral - Lateral												Offset Site Error:	0.00 ft
Survey Program: 100-MWD, 2973-MWD												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (ft)	Separation Factor	Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)			
18,400.00	6,850.69	4,886.01	2,841.09	360.67	42.41	-0.34	-542.90	2,010.43	11,219.69	11,139.57	80.12	140.038	
18,500.00	6,850.72	4,886.01	2,841.09	363.70	42.41	-0.34	-542.90	2,010.43	11,313.18	11,232.92	80.25	140.969	
18,600.00	6,850.74	4,886.01	2,841.09	366.72	42.41	-0.34	-542.90	2,010.43	11,406.77	11,326.39	80.39	141.900	
18,700.00	6,850.76	4,886.01	2,841.09	369.75	42.41	-0.34	-542.90	2,010.43	11,500.48	11,419.96	80.52	142.832	
18,800.00	6,850.79	4,886.01	2,841.09	372.77	42.41	-0.34	-542.90	2,010.43	11,594.29	11,513.64	80.65	143.763	
18,900.00	6,850.81	4,886.01	2,841.09	375.79	42.41	-0.34	-542.90	2,010.43	11,688.21	11,607.43	80.78	144.695	
19,000.00	6,850.84	4,886.01	2,841.09	378.82	42.41	-0.34	-542.90	2,010.43	11,782.22	11,701.31	80.91	145.627	
19,100.00	6,850.86	4,886.01	2,841.09	381.84	42.41	-0.34	-542.90	2,010.43	11,876.33	11,795.30	81.03	146.559	
19,200.00	6,850.89	4,886.01	2,841.09	384.87	42.41	-0.34	-542.90	2,010.43	11,970.54	11,889.38	81.16	147.490	
19,300.00	6,850.91	4,886.01	2,841.09	387.89	42.41	-0.34	-542.90	2,010.43	12,064.84	11,983.55	81.29	148.422	
19,400.00	6,850.93	4,886.01	2,841.09	390.91	42.41	-0.34	-542.90	2,010.43	12,159.23	12,077.82	81.41	149.353	
19,500.00	6,850.96	4,886.01	2,841.09	393.94	42.41	-0.34	-542.90	2,010.43	12,253.71	12,172.18	81.54	150.284	
19,600.00	6,850.98	4,886.01	2,841.09	396.96	42.41	-0.34	-542.90	2,010.43	12,348.28	12,266.62	81.66	151.215	
19,673.90	6,851.00	4,886.01	2,841.09	399.20	42.41	-0.34	-542.90	2,010.43	12,418.22	12,336.47	81.75	151.902	
19,700.00	6,851.01	4,886.01	2,841.09	399.99	42.41	-0.34	-542.90	2,010.43	12,442.93	12,361.15	81.78	152.145	
19,773.90	6,851.02	4,886.01	2,841.09	402.22	42.41	-0.34	-542.90	2,010.43	12,512.93	12,431.06	81.87	152.832	



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit 125S - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-MWD													Offset Well Error:	0.00 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
0.00	0.00	0.00	0.00	0.00	0.00	146.64	-3,035.87	1,998.80	3,634.80					
100.00	100.00	61.53	61.53	0.30	0.07	146.64	-3,036.06	1,998.98	3,635.17	3,634.82	0.36	N/A		
200.00	200.00	139.35	139.35	0.66	0.19	146.64	-3,036.82	1,999.60	3,636.40	3,635.57	0.84	4,334.482		
300.00	300.00	226.11	226.09	1.01	0.37	146.64	-3,038.08	2,000.16	3,637.98	3,636.60	1.39	2,625.479		
400.00	400.00	300.00	299.96	1.37	0.54	146.65	-3,039.57	2,000.77	3,640.13	3,638.22	1.91	1,907.445		
500.00	500.00	374.84	374.77	1.73	0.71	146.65	-3,041.63	2,001.52	3,642.98	3,640.54	2.44	1,495.187		
600.00	599.98	441.41	441.29	2.08	0.87	21.94	-3,044.01	2,002.29	3,645.01	3,642.07	2.93	1,242.813		
700.00	699.84	3,555.01	2,993.48	2.42	21.02	9.65	-1,918.00	2,002.60	3,598.40	3,581.91	16.48	218.330		
800.00	799.45	3,555.01	2,993.48	2.77	21.02	9.98	-1,918.00	2,002.60	3,528.78	3,511.92	16.86	209.277		
900.00	898.70	3,555.01	2,993.48	3.13	21.02	10.33	-1,918.00	2,002.60	3,458.15	3,440.91	17.25	200.493		
963.97	961.95	3,555.01	2,993.48	3.37	21.02	10.57	-1,918.00	2,002.60	3,412.45	3,394.95	17.50	194.961		
1,000.00	997.50	3,555.01	2,993.48	3.51	21.02	10.57	-1,918.00	2,002.60	3,386.70	3,369.05	17.64	191.947		
1,100.00	1,096.19	3,555.01	2,993.48	3.90	21.02	10.57	-1,918.00	2,002.60	3,316.21	3,298.19	18.02	184.003		
1,200.00	1,194.89	3,555.01	2,993.48	4.30	21.02	10.57	-1,918.00	2,002.60	3,247.27	3,228.85	18.42	176.288		
1,300.00	1,293.58	3,555.01	2,993.48	4.70	21.02	10.57	-1,918.00	2,002.60	3,179.99	3,161.15	18.84	168.830		
1,400.00	1,392.27	3,555.01	2,993.48	5.11	21.02	10.57	-1,918.00	2,002.60	3,114.46	3,095.19	19.27	161.651		
1,500.00	1,490.96	3,555.01	2,993.48	5.52	21.02	10.57	-1,918.00	2,002.60	3,050.80	3,031.09	19.71	154.769		
1,600.00	1,589.65	3,555.01	2,993.48	5.94	21.02	10.57	-1,918.00	2,002.60	2,989.14	2,968.97	20.17	148.197		
1,700.00	1,688.34	3,555.01	2,993.48	6.36	21.02	10.57	-1,918.00	2,002.60	2,929.58	2,908.95	20.64	141.944		
1,800.00	1,787.03	3,555.01	2,993.48	6.78	21.02	10.57	-1,918.00	2,002.60	2,872.28	2,851.16	21.12	136.016		
1,900.00	1,885.73	3,555.01	2,993.48	7.20	21.02	10.57	-1,918.00	2,002.60	2,817.36	2,795.76	21.60	130.419		
2,000.00	1,984.42	3,555.01	2,993.48	7.62	21.02	10.57	-1,918.00	2,002.60	2,764.97	2,742.88	22.09	125.156		
2,100.00	2,083.11	3,555.01	2,993.48	8.04	21.02	10.57	-1,918.00	2,002.60	2,715.25	2,692.67	22.58	120.229		
2,200.00	2,181.80	3,555.01	2,993.48	8.46	21.02	10.57	-1,918.00	2,002.60	2,668.36	2,645.28	23.08	115.637		
2,300.00	2,280.49	3,555.01	2,993.48	8.89	21.02	10.57	-1,918.00	2,002.60	2,624.44	2,600.87	23.56	111.380		
2,400.00	2,379.18	3,555.01	2,993.48	9.31	21.02	10.57	-1,918.00	2,002.60	2,583.62	2,559.60	24.04	107.458		
2,500.00	2,477.87	3,555.01	2,993.48	9.74	21.02	10.57	-1,918.00	2,002.60	2,546.12	2,521.61	24.51	103.868		
2,600.00	2,576.56	3,555.01	2,993.48	10.16	21.02	10.57	-1,918.00	2,002.60	2,512.02	2,487.06	24.97	100.607		
2,700.00	2,675.26	3,555.01	2,993.48	10.59	21.02	10.57	-1,918.00	2,002.60	2,481.49	2,456.09	25.41	97.673		
2,800.00	2,773.95	3,555.01	2,993.48	11.02	21.02	10.57	-1,918.00	2,002.60	2,454.66	2,428.83	25.82	95.061		
2,900.00	2,872.64	3,555.01	2,993.48	11.44	21.02	10.57	-1,918.00	2,002.60	2,431.64	2,405.43	26.21	92.769		
3,000.00	2,971.33	3,555.01	2,993.48	11.87	21.02	10.57	-1,918.00	2,002.60	2,412.55	2,385.98	26.57	90.791		
3,100.00	3,070.02	3,555.01	2,993.48	12.30	21.02	10.57	-1,918.00	2,002.60	2,397.49	2,370.58	26.90	89.122		
3,200.00	3,168.71	3,555.01	2,993.48	12.73	21.02	10.57	-1,918.00	2,002.60	2,386.52	2,359.32	27.19	87.758		
3,300.00	3,267.40	3,555.01	2,993.48	13.16	21.02	10.57	-1,918.00	2,002.60	2,379.71	2,352.26	27.45	86.693		
3,400.00	3,366.10	3,555.01	2,993.48	13.58	21.02	10.57	-1,918.00	2,002.60	2,377.09	2,349.42	27.67	85.920		
3,412.33	3,378.26	3,555.01	2,993.48	13.64	21.02	10.57	-1,918.00	2,002.60	2,377.05	2,349.36	27.69	85.845 CC, ES		
3,500.00	3,464.79	3,555.01	2,993.48	14.01	21.02	10.57	-1,918.00	2,002.60	2,378.67	2,350.83	27.84	85.434		
3,600.00	3,563.48	3,555.01	2,993.48	14.44	21.02	10.57	-1,918.00	2,002.60	2,384.45	2,356.47	27.98	85.228		
3,700.00	3,662.17	3,555.01	2,993.48	14.87	21.02	10.57	-1,918.00	2,002.60	2,394.40	2,366.33	28.07	85.295		
3,800.00	3,760.86	3,555.01	2,993.48	15.30	21.02	10.57	-1,918.00	2,002.60	2,408.46	2,380.33	28.13	85.626		
3,900.00	3,859.55	3,555.01	2,993.48	15.73	21.02	10.57	-1,918.00	2,002.60	2,426.56	2,398.42	28.15	86.215		
4,000.00	3,958.24	3,555.01	2,993.48	16.16	21.02	10.57	-1,918.00	2,002.60	2,448.62	2,420.49	28.13	87.053		
4,100.00	4,056.94	3,555.01	2,993.48	16.59	21.02	10.57	-1,918.00	2,002.60	2,474.53	2,446.45	28.08	88.131		
4,200.00	4,155.63	3,555.01	2,993.48	17.02	21.02	10.57	-1,918.00	2,002.60	2,504.16	2,476.16	28.00	89.441		
4,300.00	4,254.32	3,555.01	2,993.48	17.45	21.02	10.57	-1,918.00	2,002.60	2,537.39	2,509.50	27.89	90.972		
4,400.00	4,353.01	3,555.01	2,993.48	17.88	21.02	10.57	-1,918.00	2,002.60	2,574.08	2,546.32	27.76	92.716		
4,500.00	4,451.70	3,555.01	2,993.48	18.30	21.02	10.57	-1,918.00	2,002.60	2,614.08	2,586.47	27.61	94.662		
4,600.00	4,550.39	3,555.01	2,993.48	18.73	21.02	10.57	-1,918.00	2,002.60	2,657.24	2,629.79	27.45	96.801		
4,700.00	4,649.08	3,555.01	2,993.48	19.16	21.02	10.57	-1,918.00	2,002.60	2,703.42	2,676.15	27.27	99.120		
4,800.00	4,747.77	3,555.01	2,993.48	19.59	21.02	10.57	-1,918.00	2,002.60	2,752.46	2,725.37	27.09	101.611		
4,900.00	4,846.47	3,555.01	2,993.48	20.02	21.02	10.57	-1,918.00	2,002.60	2,804.20	2,777.31	26.90	104.261		

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit 125S - OH - OH													Offset Site Error:	0.00 ft	
Survey Program:		100-MWD		Offset		Semi Major Axis		Offset Wellbore Centre		Rule Assigned:				Offset Well Error:	0.00 ft
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	+N/-S	+E/-W	Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)				
5,000.00	4,945.16	3,555.01	2,993.48	20.45	21.02	10.57	-1,918.00	2,002.60	2,858.51	2,831.81	26.70	107.059			
5,100.00	5,043.85	3,555.01	2,993.48	20.88	21.02	10.57	-1,918.00	2,002.60	2,915.24	2,888.74	26.50	109.995			
5,200.00	5,142.54	3,555.01	2,993.48	21.31	21.02	10.57	-1,918.00	2,002.60	2,974.25	2,947.94	26.31	113.056			
5,300.00	5,241.23	3,555.01	2,993.48	21.74	21.02	10.57	-1,918.00	2,002.60	3,035.41	3,009.29	26.12	116.231			
5,400.00	5,339.92	3,555.01	2,993.48	22.17	21.02	10.57	-1,918.00	2,002.60	3,098.58	3,072.66	25.93	119.509			
5,500.00	5,438.61	3,555.01	2,993.48	22.61	21.02	10.57	-1,918.00	2,002.60	3,163.66	3,137.92	25.75	122.878			
5,600.00	5,537.31	3,555.01	2,993.48	23.04	21.02	10.57	-1,918.00	2,002.60	3,230.52	3,204.95	25.57	126.328			
5,700.00	5,636.00	3,555.01	2,993.48	23.47	21.02	10.57	-1,918.00	2,002.60	3,299.06	3,273.66	25.41	129.846			
5,800.00	5,734.69	3,555.01	2,993.48	23.90	21.02	10.57	-1,918.00	2,002.60	3,369.18	3,343.93	25.25	133.422			
5,900.00	5,833.38	3,555.01	2,993.48	24.33	21.02	10.57	-1,918.00	2,002.60	3,440.77	3,415.66	25.11	137.045			
6,000.00	5,932.07	3,555.01	2,993.48	24.76	21.02	10.57	-1,918.00	2,002.60	3,513.75	3,488.78	24.97	140.705			
6,100.00	6,030.76	3,555.01	2,993.48	25.19	21.02	10.57	-1,918.00	2,002.60	3,588.03	3,563.18	24.85	144.391			
6,200.00	6,129.45	3,555.01	2,993.48	25.62	21.02	10.57	-1,918.00	2,002.60	3,663.54	3,638.80	24.74	148.095			
6,300.00	6,228.15	3,555.01	2,993.48	26.05	21.02	10.57	-1,918.00	2,002.60	3,740.19	3,715.55	24.64	151.806			
6,370.81	6,298.03	3,555.01	2,993.48	26.35	21.02	10.57	-1,918.00	2,002.60	3,795.12	3,770.55	24.57	154.433			
6,400.00	6,326.74	3,555.01	2,993.48	26.48	21.02	15.81	-1,918.00	2,002.60	3,817.63	3,793.08	24.55	155.533			
6,450.00	6,375.33	3,555.01	2,993.48	26.73	21.02	20.01	-1,918.00	2,002.60	3,854.91	3,830.42	24.49	157.431			
6,500.00	6,422.93	3,555.01	2,993.48	26.99	21.02	21.50	-1,918.00	2,002.60	3,890.43	3,866.02	24.42	159.328			
6,550.00	6,469.25	3,555.01	2,993.48	27.29	21.02	21.86	-1,918.00	2,002.60	3,924.04	3,899.70	24.34	161.199			
6,600.00	6,513.99	3,555.01	2,993.48	27.61	21.02	21.71	-1,918.00	2,002.60	3,955.58	3,931.31	24.26	163.027			
6,650.00	6,556.88	3,555.01	2,993.48	27.96	21.02	21.35	-1,918.00	2,002.60	3,984.90	3,960.71	24.18	164.793			
6,700.00	6,597.66	3,555.01	2,993.48	28.34	21.02	20.92	-1,918.00	2,002.60	4,011.87	3,987.77	24.10	166.477			
6,750.00	6,636.07	3,555.01	2,993.48	28.76	21.02	20.48	-1,918.00	2,002.60	4,036.37	4,012.35	24.02	168.055			
6,800.00	6,671.88	3,555.01	2,993.48	29.21	21.02	20.06	-1,918.00	2,002.60	4,058.30	4,034.36	23.94	169.501			
6,850.00	6,704.87	3,555.01	2,993.48	29.71	21.02	19.70	-1,918.00	2,002.60	4,077.58	4,053.70	23.88	170.787			
6,900.00	6,734.84	3,555.01	2,993.48	30.25	21.02	19.39	-1,918.00	2,002.60	4,094.10	4,070.28	23.82	171.884			
6,950.00	6,761.59	3,555.01	2,993.48	30.85	21.02	19.15	-1,918.00	2,002.60	4,107.82	4,084.04	23.78	172.763			
7,000.00	6,784.97	3,555.01	2,993.48	31.50	21.02	18.98	-1,918.00	2,002.60	4,118.67	4,094.91	23.75	173.397			
7,050.00	6,804.83	3,555.01	2,993.48	32.20	21.02	18.87	-1,918.00	2,002.60	4,126.60	4,102.85	23.75	173.760			
7,100.00	6,821.05	3,555.01	2,993.48	32.96	21.02	18.84	-1,918.00	2,002.60	4,131.60	4,107.83	23.77	173.832			
7,110.82	6,824.07	3,555.01	2,993.48	33.13	21.02	18.84	-1,918.00	2,002.60	4,132.29	4,108.51	23.78	173.801			
7,150.00	6,833.53	3,555.01	2,993.48	33.77	21.02	18.88	-1,918.00	2,002.60	4,133.62	4,109.81	23.81	173.599			
7,189.64	6,840.71	3,555.01	2,993.48	34.44	21.02	18.96	-1,918.00	2,002.60	4,133.12	4,109.25	23.87	173.187			
7,200.00	6,842.18	3,555.01	2,993.48	34.62	21.02	18.99	-1,918.00	2,002.60	4,132.68	4,108.80	23.88	173.054			
7,240.48	6,846.36	3,555.01	2,993.48	35.34	21.02	19.13	-1,918.00	2,002.60	4,129.74	4,105.78	23.96	172.380			
7,250.00	6,846.97	3,555.01	2,993.48	35.52	21.02	19.17	-1,918.00	2,002.60	4,128.77	4,104.79	23.98	172.196			
7,279.71	6,847.97	3,555.01	2,993.48	36.06	21.02	19.32	-1,918.00	2,002.60	4,125.04	4,100.99	24.05	171.538			
7,286.15	6,848.00	3,555.01	2,993.48	36.18	21.02	19.36	-1,918.00	2,002.60	4,124.10	4,100.03	24.06	171.383			
7,297.60	6,848.00	3,555.01	2,993.48	36.40	21.02	19.36	-1,918.00	2,002.60	4,122.39	4,098.30	24.09	171.095			
7,300.00	6,848.00	3,555.01	2,993.48	36.44	21.02	19.36	-1,918.00	2,002.60	4,122.04	4,097.93	24.10	171.034			
7,381.99	6,848.02	3,555.01	2,993.48	38.04	21.02	19.36	-1,918.00	2,002.60	4,110.77	4,086.41	24.36	168.729			
7,400.00	6,848.03	3,555.01	2,993.48	38.40	21.02	19.36	-1,918.00	2,002.60	4,108.51	4,084.08	24.43	168.199			
7,481.33	6,848.05	3,555.01	2,993.48	40.10	21.02	19.36	-1,918.00	2,002.60	4,099.28	4,074.50	24.78	165.428			
7,500.00	6,848.05	3,555.01	2,993.48	40.49	21.02	19.36	-1,918.00	2,002.60	4,097.38	4,072.52	24.87	164.771			
7,580.68	6,848.07	3,555.01	2,993.48	42.27	21.02	19.36	-1,918.00	2,002.60	4,090.16	4,064.86	25.31	161.621			
7,600.00	6,848.08	3,555.01	2,993.48	42.70	21.02	19.36	-1,918.00	2,002.60	4,088.67	4,063.25	25.42	160.849			
7,680.03	6,848.10	3,555.01	2,993.48	44.55	21.02	19.36	-1,918.00	2,002.60	4,083.45	4,057.51	25.94	157.409			
7,700.00	6,848.10	3,555.01	2,993.48	45.01	21.02	19.36	-1,918.00	2,002.60	4,082.39	4,056.31	26.08	156.540			
7,779.38	6,848.12	3,555.01	2,993.48	46.90	21.02	19.36	-1,918.00	2,002.60	4,079.14	4,052.47	26.68	152.900			
7,800.00	6,848.12	3,555.01	2,993.48	47.40	21.02	19.36	-1,918.00	2,002.60	4,078.55	4,051.71	26.84	151.951			
7,878.74	6,848.14	3,555.01	2,993.48	49.34	21.02	19.36	-1,918.00	2,002.60	4,077.26	4,049.74	27.51	148.197			
7,900.00	6,848.15	3,555.01	2,993.48	49.86	21.02	19.36	-1,918.00	2,002.60	4,077.17	4,049.46	27.70	147.186			

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit 125S - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-MWD													Offset Well Error:	0.00 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Distance Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
7,922.54	6,848.15	3,555.01	2,993.48	50.43	21.02	19.36	-1,918.00	2,002.60	4,077.19	4,049.28	27.91	146.088		
8,000.00	6,848.17	3,555.01	2,993.48	52.39	21.02	19.36	-1,918.00	2,002.60	4,078.23	4,049.58	28.65	142.347		
8,021.82	6,848.18	3,555.01	2,993.48	52.95	21.02	19.36	-1,918.00	2,002.60	4,078.79	4,049.92	28.87	141.281		
8,100.00	6,848.20	3,555.01	2,993.48	54.96	21.02	19.36	-1,918.00	2,002.60	4,081.75	4,052.06	29.68	137.521		
8,200.00	6,848.22	3,555.01	2,993.48	57.58	21.02	19.36	-1,918.00	2,002.60	4,087.71	4,056.92	30.78	132.788		
8,300.00	6,848.25	3,555.01	2,993.48	60.24	21.02	19.36	-1,918.00	2,002.60	4,096.10	4,064.15	31.95	128.211		
8,400.00	6,848.27	3,555.01	2,993.48	62.94	21.02	19.36	-1,918.00	2,002.60	4,106.91	4,073.75	33.16	123.839		
8,500.00	6,848.29	3,555.01	2,993.48	65.66	21.02	19.36	-1,918.00	2,002.60	4,120.12	4,085.70	34.42	119.705		
8,600.00	6,848.32	3,555.01	2,993.48	68.42	21.02	19.36	-1,918.00	2,002.60	4,135.71	4,100.00	35.70	115.831		
8,700.00	6,848.34	3,555.01	2,993.48	71.19	21.02	19.36	-1,918.00	2,002.60	4,153.64	4,116.63	37.01	112.226		
8,800.00	6,848.37	3,555.01	2,993.48	73.99	21.02	19.36	-1,918.00	2,002.60	4,173.90	4,135.57	38.33	108.893		
8,900.00	6,848.39	3,555.01	2,993.48	76.80	21.02	19.36	-1,918.00	2,002.60	4,196.44	4,156.79	39.65	105.827		
9,000.00	6,848.42	3,555.01	2,993.48	79.63	21.02	19.36	-1,918.00	2,002.60	4,221.23	4,180.26	40.98	103.019		
9,100.00	6,848.44	3,555.01	2,993.48	82.47	21.02	19.36	-1,918.00	2,002.60	4,248.23	4,205.94	42.29	100.457		
9,200.00	6,848.46	3,555.01	2,993.48	85.33	21.02	19.36	-1,918.00	2,002.60	4,277.40	4,233.81	43.59	98.127		
9,300.00	6,848.49	3,555.01	2,993.48	88.20	21.02	19.36	-1,918.00	2,002.60	4,308.70	4,263.82	44.87	96.016		
9,400.00	6,848.51	3,555.01	2,993.48	91.08	21.02	19.36	-1,918.00	2,002.60	4,342.07	4,295.93	46.14	94.108		
9,500.00	6,848.54	3,555.01	2,993.48	93.97	21.02	19.36	-1,918.00	2,002.60	4,377.47	4,330.09	47.38	92.391		
9,600.00	6,848.56	3,555.01	2,993.48	96.87	21.02	19.36	-1,918.00	2,002.60	4,414.85	4,366.26	48.59	90.851		
9,700.00	6,848.58	3,555.01	2,993.48	99.77	21.02	19.36	-1,918.00	2,002.60	4,454.17	4,404.38	49.78	89.474		
9,800.00	6,848.61	3,555.01	2,993.48	102.69	21.02	19.36	-1,918.00	2,002.60	4,495.36	4,444.42	50.94	88.250		
9,900.00	6,848.63	3,555.01	2,993.48	105.61	21.02	19.36	-1,918.00	2,002.60	4,538.39	4,486.32	52.07	87.166		
10,000.00	6,848.66	3,555.01	2,993.48	108.53	21.02	19.36	-1,918.00	2,002.60	4,583.19	4,530.03	53.16	86.213		
10,100.00	6,848.68	3,555.01	2,993.48	111.46	21.02	19.36	-1,918.00	2,002.60	4,629.72	4,575.50	54.22	85.380		
10,200.00	6,848.71	3,555.01	2,993.48	114.40	21.02	19.36	-1,918.00	2,002.60	4,677.93	4,622.67	55.26	84.659		
10,300.00	6,848.73	3,555.01	2,993.48	117.34	21.02	19.36	-1,918.00	2,002.60	4,727.76	4,671.50	56.25	84.043		
10,400.00	6,848.75	3,555.01	2,993.48	120.29	21.02	19.36	-1,918.00	2,002.60	4,779.16	4,721.94	57.22	83.522		
10,500.00	6,848.78	3,555.01	2,993.48	123.24	21.02	19.36	-1,918.00	2,002.60	4,832.09	4,773.93	58.15	83.092		
10,600.00	6,848.80	3,555.01	2,993.48	126.20	21.02	19.36	-1,918.00	2,002.60	4,886.49	4,827.43	59.06	82.745		
10,700.00	6,848.83	3,555.01	2,993.48	129.16	21.02	19.36	-1,918.00	2,002.60	4,942.31	4,882.39	59.93	82.475		
10,800.00	6,848.85	3,555.01	2,993.48	132.12	21.02	19.36	-1,918.00	2,002.60	4,999.51	4,938.75	60.76	82.278		
10,900.00	6,848.88	3,555.01	2,993.48	135.08	21.02	19.36	-1,918.00	2,002.60	5,058.04	4,996.47	61.57	82.148		
11,000.00	6,848.90	3,555.01	2,993.48	138.05	21.02	19.36	-1,918.00	2,002.60	5,117.86	5,055.51	62.35	82.081		
11,100.00	6,848.92	3,555.01	2,993.48	141.02	21.02	19.36	-1,918.00	2,002.60	5,178.92	5,115.81	63.10	82.073 SF		
11,200.00	6,848.95	3,555.01	2,993.48	144.00	21.02	19.36	-1,918.00	2,002.60	5,241.17	5,177.35	63.82	82.120		
11,300.00	6,848.97	3,555.01	2,993.48	146.97	21.02	19.36	-1,918.00	2,002.60	5,304.58	5,240.06	64.52	82.219		
11,400.00	6,849.00	3,555.01	2,993.48	149.95	21.02	19.36	-1,918.00	2,002.60	5,369.10	5,303.91	65.19	82.365		
11,500.00	6,849.02	3,555.01	2,993.48	152.93	21.02	19.36	-1,918.00	2,002.60	5,434.69	5,368.87	65.83	82.558		
11,600.00	6,849.04	3,555.01	2,993.48	155.91	21.02	19.36	-1,918.00	2,002.60	5,501.33	5,434.88	66.45	82.793		
11,700.00	6,849.07	3,555.01	2,993.48	158.90	21.02	19.36	-1,918.00	2,002.60	5,568.96	5,501.92	67.04	83.068		
11,800.00	6,849.09	3,555.01	2,993.48	161.88	21.02	19.36	-1,918.00	2,002.60	5,637.55	5,569.94	67.61	83.380		
11,900.00	6,849.12	3,555.01	2,993.48	164.87	21.02	19.36	-1,918.00	2,002.60	5,707.07	5,638.91	68.16	83.728		
12,000.00	6,849.14	3,555.01	2,993.48	167.86	21.02	19.36	-1,918.00	2,002.60	5,777.48	5,708.79	68.69	84.110		
12,100.00	6,849.17	3,555.01	2,993.48	170.85	21.02	19.36	-1,918.00	2,002.60	5,848.76	5,779.56	69.20	84.523		
12,200.00	6,849.19	3,555.01	2,993.48	173.84	21.02	19.36	-1,918.00	2,002.60	5,920.87	5,851.18	69.69	84.965		
12,300.00	6,849.21	3,555.01	2,993.48	176.84	21.02	19.36	-1,918.00	2,002.60	5,993.78	5,923.62	70.16	85.436		
12,400.00	6,849.24	3,555.01	2,993.48	179.83	21.02	19.36	-1,918.00	2,002.60	6,067.46	5,996.85	70.61	85.934		
12,500.00	6,849.26	3,555.01	2,993.48	182.83	21.02	19.36	-1,918.00	2,002.60	6,141.88	6,070.84	71.04	86.456		
12,600.00	6,849.29	3,555.01	2,993.48	185.82	21.02	19.36	-1,918.00	2,002.60	6,217.03	6,145.57	71.46	87.003		
12,700.00	6,849.31	3,555.01	2,993.48	188.82	21.02	19.36	-1,918.00	2,002.60	6,292.86	6,221.00	71.86	87.571		
12,800.00	6,849.34	3,555.01	2,993.48	191.82	21.02	19.36	-1,918.00	2,002.60	6,369.36	6,297.12	72.25	88.162		
12,900.00	6,849.36	3,555.01	2,993.48	194.82	21.02	19.36	-1,918.00	2,002.60	6,446.51	6,373.89	72.62	88.772		

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit 125S - OH - OH													Offset Site Error:	0.00 ft	
Survey Program:		100-MWD		Offset		Semi Major Axis		Offset Wellbore Centre		Rule Assigned:				Offset Well Error:	0.00 ft
Reference	Vertical	Measured	Vertical	Reference	Offset	Highside				Distance					
Measured	Depth	Depth	Depth	Depth		Toolface	+N/-S	+E/-W	Between	Between	Minimum	Separation		Warning	
Depth	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	(ft)	(ft)	Centres	Ellipses	Separation	Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)				
13,000.00	6,849.38	3,555.01	2,993.48	197.82	21.02	19.36	-1,918.00	2,002.60	6,524.28	6,451.30	72.98	89.402			
13,100.00	6,849.41	3,555.01	2,993.48	200.83	21.02	19.36	-1,918.00	2,002.60	6,602.64	6,529.32	73.32	90.050			
13,200.00	6,849.43	3,555.01	2,993.48	203.83	21.02	19.36	-1,918.00	2,002.60	6,681.58	6,607.93	73.65	90.715			
13,300.00	6,849.46	3,555.01	2,993.48	206.83	21.02	19.36	-1,918.00	2,002.60	6,761.08	6,687.11	73.98	91.397			
13,400.00	6,849.48	3,555.01	2,993.48	209.84	21.02	19.36	-1,918.00	2,002.60	6,841.12	6,766.83	74.28	92.094			
13,500.00	6,849.50	3,555.01	2,993.48	212.84	21.02	19.36	-1,918.00	2,002.60	6,921.68	6,847.09	74.58	92.806			
13,600.00	6,849.53	3,555.01	2,993.48	215.85	21.02	19.36	-1,918.00	2,002.60	7,002.73	6,927.86	74.87	93.533			
13,700.00	6,849.55	3,555.01	2,993.48	218.86	21.02	19.36	-1,918.00	2,002.60	7,084.28	7,009.13	75.15	94.273			
13,800.00	6,849.58	3,555.01	2,993.48	221.87	21.02	19.36	-1,918.00	2,002.60	7,166.29	7,090.87	75.41	95.026			
13,900.00	6,849.60	3,555.01	2,993.48	224.87	21.02	19.36	-1,918.00	2,002.60	7,248.75	7,173.07	75.67	95.791			
14,000.00	6,849.63	3,555.01	2,993.48	227.88	21.02	19.36	-1,918.00	2,002.60	7,331.64	7,255.72	75.92	96.567			
14,100.00	6,849.65	3,555.01	2,993.48	230.89	21.02	19.36	-1,918.00	2,002.60	7,414.96	7,338.80	76.16	97.355			
14,200.00	6,849.67	3,555.01	2,993.48	233.90	21.02	19.36	-1,918.00	2,002.60	7,498.69	7,422.29	76.40	98.154			
14,300.00	6,849.70	3,555.01	2,993.48	236.92	21.02	19.36	-1,918.00	2,002.60	7,582.81	7,506.19	76.62	98.962			
14,400.00	6,849.72	3,555.01	2,993.48	239.93	21.02	19.36	-1,918.00	2,002.60	7,667.32	7,590.48	76.84	99.780			
14,500.00	6,849.75	3,555.01	2,993.48	242.94	21.02	19.36	-1,918.00	2,002.60	7,752.19	7,675.14	77.05	100.608			
14,600.00	6,849.77	3,555.01	2,993.48	245.95	21.02	19.36	-1,918.00	2,002.60	7,837.42	7,760.16	77.26	101.444			
14,700.00	6,849.80	3,555.01	2,993.48	248.96	21.02	19.36	-1,918.00	2,002.60	7,922.99	7,845.53	77.46	102.289			
14,800.00	6,849.82	3,555.01	2,993.48	251.98	21.02	19.36	-1,918.00	2,002.60	8,008.90	7,931.25	77.65	103.141			
14,900.00	6,849.84	3,555.01	2,993.48	254.99	21.02	19.36	-1,918.00	2,002.60	8,095.13	8,017.30	77.84	104.001			
15,000.00	6,849.87	3,555.01	2,993.48	258.01	21.02	19.36	-1,918.00	2,002.60	8,181.68	8,103.66	78.02	104.869			
15,100.00	6,849.89	3,555.01	2,993.48	261.02	21.02	19.36	-1,918.00	2,002.60	8,268.53	8,190.33	78.19	105.743			
15,200.00	6,849.92	3,555.01	2,993.48	264.04	21.02	19.36	-1,918.00	2,002.60	8,355.67	8,277.30	78.37	106.625			
15,300.00	6,849.94	3,555.01	2,993.48	267.05	21.02	19.36	-1,918.00	2,002.60	8,443.10	8,364.57	78.53	107.512			
15,400.00	6,849.97	3,555.01	2,993.48	270.07	21.02	19.36	-1,918.00	2,002.60	8,530.80	8,452.11	78.69	108.406			
15,500.00	6,849.99	3,555.01	2,993.48	273.08	21.02	19.36	-1,918.00	2,002.60	8,618.77	8,539.92	78.85	109.305			
15,600.00	6,850.01	3,555.01	2,993.48	276.10	21.02	19.36	-1,918.00	2,002.60	8,707.01	8,628.00	79.00	110.210			
15,700.00	6,850.04	3,555.01	2,993.48	279.12	21.02	19.36	-1,918.00	2,002.60	8,795.49	8,716.34	79.15	111.120			
15,800.00	6,850.06	3,555.01	2,993.48	282.14	21.02	19.36	-1,918.00	2,002.60	8,884.22	8,804.92	79.30	112.035			
15,900.00	6,850.09	3,555.01	2,993.48	285.15	21.02	19.36	-1,918.00	2,002.60	8,973.18	8,893.74	79.44	112.955			
16,000.00	6,850.11	3,555.01	2,993.48	288.17	21.02	19.36	-1,918.00	2,002.60	9,062.38	8,982.80	79.58	113.880			
16,100.00	6,850.13	3,555.01	2,993.48	291.19	21.02	19.36	-1,918.00	2,002.60	9,151.80	9,072.08	79.71	114.809			
16,200.00	6,850.16	3,555.01	2,993.48	294.21	21.02	19.36	-1,918.00	2,002.60	9,241.43	9,161.59	79.85	115.742			
16,300.00	6,850.18	3,555.01	2,993.48	297.23	21.02	19.36	-1,918.00	2,002.60	9,331.28	9,251.30	79.97	116.679			
16,400.00	6,850.21	3,555.01	2,993.48	300.25	21.02	19.36	-1,918.00	2,002.60	9,421.33	9,341.23	80.10	117.620			
16,500.00	6,850.23	3,555.01	2,993.48	303.27	21.02	19.36	-1,918.00	2,002.60	9,511.58	9,431.36	80.22	118.565			
16,600.00	6,850.26	3,555.01	2,993.48	306.28	21.02	19.36	-1,918.00	2,002.60	9,602.02	9,521.68	80.34	119.513			
16,700.00	6,850.28	3,555.01	2,993.48	309.30	21.02	19.36	-1,918.00	2,002.60	9,692.65	9,612.19	80.46	120.464			
16,800.00	6,850.30	3,555.01	2,993.48	312.32	21.02	19.36	-1,918.00	2,002.60	9,783.46	9,702.89	80.58	121.418			
16,900.00	6,850.33	3,555.01	2,993.48	315.35	21.02	19.36	-1,918.00	2,002.60	9,874.45	9,793.76	80.69	122.375			
17,000.00	6,850.35	3,555.01	2,993.48	318.37	21.02	19.36	-1,918.00	2,002.60	9,965.62	9,884.82	80.80	123.336			
17,100.00	6,850.38	3,555.01	2,993.48	321.39	21.02	19.36	-1,918.00	2,002.60	10,056.95	9,976.04	80.91	124.298			
17,200.00	6,850.40	3,555.01	2,993.48	324.41	21.02	19.36	-1,918.00	2,002.60	10,148.44	10,067.43	81.02	125.264			
17,300.00	6,850.43	3,555.01	2,993.48	327.43	21.02	19.36	-1,918.00	2,002.60	10,240.10	10,158.98	81.12	126.231			
17,400.00	6,850.45	3,555.01	2,993.48	330.45	21.02	19.36	-1,918.00	2,002.60	10,331.91	10,250.68	81.22	127.201			
17,500.00	6,850.47	3,555.01	2,993.48	333.47	21.02	19.36	-1,918.00	2,002.60	10,423.86	10,342.54	81.33	128.173			
17,600.00	6,850.50	3,555.01	2,993.48	336.49	21.02	19.36	-1,918.00	2,002.60	10,515.97	10,434.54	81.43	129.148			
17,700.00	6,850.52	3,555.01	2,993.48	339.52	21.02	19.36	-1,918.00	2,002.60	10,608.22	10,526.70	81.52	130.124			
17,800.00	6,850.55	3,555.01	2,993.48	342.54	21.02	19.36	-1,918.00	2,002.60	10,700.61	10,618.99	81.62	131.101			
17,900.00	6,850.57	3,555.01	2,993.48	345.56	21.02	19.36	-1,918.00	2,002.60	10,793.13	10,711.42	81.72	132.081			
18,000.00	6,850.59	3,555.01	2,993.48	348.58	21.02	19.36	-1,918.00	2,002.60	10,885.79	10,803.98	81.81	133.062			
18,100.00	6,850.62	3,555.01	2,993.48	351.61	21.02	19.36	-1,918.00	2,002.60	10,978.57	10,896.67	81.90	134.045			

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit 125S - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 100-MWD													Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Rule Assigned:		Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
18,200.00	6,850.64	3,555.01	2,993.48	354.63	21.02	19.36	-1,918.00	2,002.60	11,071.48	10,989.49	81.99	135.029		
18,300.00	6,850.67	3,555.01	2,993.48	357.65	21.02	19.36	-1,918.00	2,002.60	11,164.52	11,082.43	82.08	136.014		
18,400.00	6,850.69	3,555.01	2,993.48	360.67	21.02	19.36	-1,918.00	2,002.60	11,257.67	11,175.50	82.17	137.000		
18,500.00	6,850.72	3,555.01	2,993.48	363.70	21.02	19.36	-1,918.00	2,002.60	11,350.94	11,268.68	82.26	137.988		
18,600.00	6,850.74	3,555.01	2,993.48	366.72	21.02	19.36	-1,918.00	2,002.60	11,444.32	11,361.97	82.35	138.977		
18,700.00	6,850.76	3,555.01	2,993.48	369.75	21.02	19.36	-1,918.00	2,002.60	11,537.81	11,455.38	82.43	139.966		
18,800.00	6,850.79	3,555.01	2,993.48	372.77	21.02	19.36	-1,918.00	2,002.60	11,631.42	11,548.90	82.52	140.957		
18,900.00	6,850.81	3,555.01	2,993.48	375.79	21.02	19.36	-1,918.00	2,002.60	11,725.12	11,642.52	82.60	141.948		
19,000.00	6,850.84	3,555.01	2,993.48	378.82	21.02	19.36	-1,918.00	2,002.60	11,818.93	11,736.25	82.68	142.940		
19,100.00	6,850.86	3,555.01	2,993.48	381.84	21.02	19.36	-1,918.00	2,002.60	11,912.85	11,830.08	82.77	143.932		
19,200.00	6,850.89	3,555.01	2,993.48	384.87	21.02	19.36	-1,918.00	2,002.60	12,006.86	11,924.01	82.85	144.925		
19,300.00	6,850.91	3,555.01	2,993.48	387.89	21.02	19.36	-1,918.00	2,002.60	12,100.96	12,018.03	82.93	145.919		
19,400.00	6,850.93	3,555.01	2,993.48	390.91	21.02	19.36	-1,918.00	2,002.60	12,195.16	12,112.15	83.01	146.913		
19,500.00	6,850.96	3,555.01	2,993.48	393.94	21.02	19.36	-1,918.00	2,002.60	12,289.45	12,206.36	83.09	147.908		
19,600.00	6,850.98	3,555.01	2,993.48	396.96	21.02	19.36	-1,918.00	2,002.60	12,383.83	12,300.67	83.17	148.902		
19,673.90	6,851.00	3,555.01	2,993.48	399.20	21.02	19.36	-1,918.00	2,002.60	12,453.63	12,370.41	83.22	149.639		
19,700.00	6,851.01	3,555.01	2,993.48	399.99	21.02	19.36	-1,918.00	2,002.60	12,478.30	12,395.05	83.25	149.898		
19,773.90	6,851.02	3,555.01	2,993.48	402.22	21.02	19.36	-1,918.00	2,002.60	12,548.17	12,464.86	83.30	150.634		

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit 133 Lateral - Lateral #1 - As Drilled													Offset Site Error:	0.00 ft
Survey Program: 100-Standard Keeper, 2454-MWD SDI													Offset Well Error:	15.00 ft
Reference													Rule Assigned:	
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Semi Major Axis Offset	Highside Toolface	Offset Wellbore Centre		Distance		Minimum Separation	Separation Factor	Warning	
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	(ft)			
0.00	0.00	0.00	0.00	0.00	15.00	95.63	-617.11	6,262.80	6,294.22					
100.00	100.00	0.00	0.00	0.30	15.00	95.63	-617.11	6,262.80	6,293.16	6,277.86	15.30	411.384		
200.00	200.00	129.68	129.68	0.66	15.00	95.63	-616.93	6,262.12	6,292.60	6,276.95	15.66	401.922		
300.00	300.00	200.00	200.00	1.01	15.00	95.62	-616.64	6,261.77	6,292.08	6,276.06	16.02	392.868		
400.00	400.00	294.78	294.78	1.37	15.00	95.62	-616.35	6,261.55	6,291.82	6,275.44	16.38	384.210		
500.00	500.00	391.65	391.64	1.73	15.01	95.62	-616.28	6,261.40	6,291.66	6,274.92	16.74	375.905		
600.00	599.98	488.73	488.72	2.08	15.01	-29.12	-616.24	6,261.29	6,290.02	6,272.94	17.09	368.119		
700.00	699.84	582.76	582.75	2.42	15.02	-29.19	-616.12	6,261.26	6,285.40	6,267.97	17.43	360.597		
800.00	799.45	667.63	667.62	2.77	15.02	-29.30	-615.73	6,261.39	6,277.90	6,260.12	17.78	353.094		
900.00	898.70	762.72	762.71	3.13	15.02	-29.46	-614.88	6,261.76	6,267.57	6,249.43	18.14	345.591		
963.97	961.95	829.66	829.64	3.37	15.03	-29.60	-614.07	6,262.03	6,259.36	6,240.99	18.37	340.756		
1,000.00	997.50	868.22	868.20	3.51	15.03	-29.63	-613.65	6,262.15	6,254.37	6,235.87	18.50	338.057		
1,100.00	1,096.19	960.61	960.59	3.90	15.03	-29.70	-612.86	6,262.42	6,240.53	6,221.66	18.86	330.805		
1,200.00	1,194.89	1,056.16	1,056.13	4.30	15.04	-29.78	-612.31	6,262.82	6,226.84	6,207.60	19.23	323.747		
1,300.00	1,293.58	1,178.00	1,177.97	4.70	15.05	-29.88	-611.24	6,263.18	6,213.03	6,193.42	19.61	316.862		
1,400.00	1,392.27	1,268.91	1,268.88	5.11	15.06	-29.96	-610.40	6,263.23	6,198.99	6,179.00	19.99	310.177		
1,500.00	1,490.96	1,366.38	1,366.34	5.52	15.07	-30.04	-609.43	6,263.47	6,185.14	6,164.77	20.37	303.707		
1,600.00	1,589.65	1,467.70	1,467.66	5.94	15.08	-30.13	-608.28	6,263.66	6,171.22	6,150.48	20.75	297.437		
1,700.00	1,688.34	1,578.48	1,578.43	6.36	15.10	-30.22	-607.22	6,263.77	6,157.25	6,136.12	21.13	291.363		
1,800.00	1,787.03	1,687.02	1,686.97	6.78	15.12	-30.32	-606.03	6,263.64	6,143.07	6,121.55	21.52	285.471		
1,900.00	1,885.73	1,830.13	1,830.06	7.20	15.14	-30.44	-604.17	6,262.87	6,128.48	6,106.57	21.91	279.750		
2,000.00	1,984.42	1,938.14	1,938.06	7.62	15.16	-30.54	-603.09	6,261.72	6,113.39	6,091.10	22.30	274.171		
2,100.00	2,083.11	2,024.13	2,024.04	8.04	15.17	-30.61	-602.39	6,260.86	6,098.41	6,075.72	22.69	268.760		
2,200.00	2,181.80	2,107.14	2,107.04	8.46	15.18	-30.68	-601.87	6,260.23	6,083.68	6,060.60	23.09	263.526		
2,300.00	2,280.49	2,217.19	2,217.09	8.89	15.20	-30.77	-601.15	6,259.44	6,069.02	6,045.54	23.48	258.462		
2,400.00	2,379.18	2,331.79	2,331.67	9.31	15.23	-30.87	-600.06	6,258.24	6,054.00	6,030.12	23.88	253.537		
2,500.00	2,477.87	2,400.00	2,399.88	9.74	15.24	-30.93	-599.54	6,257.58	6,039.15	6,014.87	24.28	248.753		
2,600.00	2,576.56	2,432.61	2,432.50	10.16	15.24	-30.96	-599.35	6,257.53	6,025.14	6,000.46	24.67	244.187		
2,700.00	2,675.26	2,454.00	2,453.88	10.59	15.24	-30.98	-599.22	6,257.73	6,012.30	5,987.23	25.07	239.820		
2,800.00	2,773.95	2,454.00	2,453.88	11.02	15.24	-30.98	-599.22	6,257.73	6,000.98	5,975.51	25.46	235.672		
2,900.00	2,872.64	2,454.00	2,453.88	11.44	15.24	-30.98	-599.22	6,257.73	5,991.30	5,965.45	25.85	231.758		
3,000.00	2,971.33	2,454.00	2,453.88	11.87	15.24	-30.98	-599.22	6,257.73	5,983.28	5,957.04	26.23	228.069		
3,100.00	3,070.02	2,454.00	2,453.88	12.30	15.24	-30.98	-599.22	6,257.73	5,976.92	5,950.31	26.61	224.596		
3,200.00	3,168.71	2,454.00	2,453.88	12.73	15.24	-30.98	-599.22	6,257.73	5,972.23	5,945.25	26.98	221.332		
3,300.00	3,267.40	2,454.00	2,453.88	13.16	15.24	-30.98	-599.22	6,257.73	5,969.21	5,941.86	27.35	218.269		
3,400.00	3,366.10	2,454.00	2,453.88	13.58	15.24	-30.98	-599.22	6,257.73	5,967.87	5,940.16	27.71	215.399		
3,430.20	3,395.90	2,454.00	2,453.88	13.71	15.24	-30.98	-599.22	6,257.73	5,967.79	5,939.98	27.81	214.569		
3,500.00	3,464.79	2,454.00	2,453.88	14.01	15.24	-30.98	-599.22	6,257.73	5,968.20	5,940.14	28.06	212.715		
3,567.86	3,531.76	2,489.58	2,489.25	14.30	15.25	-31.02	-597.64	6,260.81	5,966.74	5,938.43	28.31	210.759		
3,600.00	3,563.48	2,490.85	2,490.50	14.44	15.25	-31.02	-597.53	6,261.02	5,967.37	5,938.95	28.42	209.956		
3,700.00	3,662.17	2,528.00	2,526.23	14.87	15.25	-31.10	-592.91	6,269.89	5,972.72	5,943.93	28.78	207.501		
3,800.00	3,760.86	2,528.00	2,526.23	15.30	15.25	-31.10	-592.91	6,269.89	5,976.86	5,947.74	29.12	205.261		
3,900.00	3,859.55	2,528.00	2,526.23	15.73	15.25	-31.10	-592.91	6,269.89	5,982.66	5,953.22	29.44	203.183		
4,000.00	3,958.24	2,528.00	2,526.23	16.16	15.25	-31.10	-592.91	6,269.89	5,990.14	5,960.37	29.76	201.261		
4,100.00	4,056.94	2,528.00	2,526.23	16.59	15.25	-31.10	-592.91	6,269.89	5,999.27	5,969.19	30.07	199.489		
4,200.00	4,155.63	2,528.00	2,526.23	17.02	15.25	-31.10	-592.91	6,269.89	6,010.05	5,979.67	30.38	197.861		
4,300.00	4,254.32	2,528.00	2,526.23	17.45	15.25	-31.10	-592.91	6,269.89	6,022.47	5,991.80	30.67	196.373		
4,400.00	4,353.01	2,528.00	2,526.23	17.88	15.25	-31.10	-592.91	6,269.89	6,036.52	6,005.57	30.95	195.020		
4,500.00	4,451.70	2,528.00	2,526.23	18.30	15.25	-31.10	-592.91	6,269.89	6,052.19	6,020.96	31.23	193.797		
4,600.00	4,550.39	2,528.00	2,526.23	18.73	15.25	-31.10	-592.91	6,269.89	6,069.47	6,037.98	31.50	192.698		
4,700.00	4,649.08	2,528.00	2,526.23	19.16	15.25	-31.10	-592.91	6,269.89	6,088.35	6,056.59	31.76	191.720		
4,800.00	4,747.77	2,528.00	2,526.23	19.59	15.25	-31.10	-592.91	6,269.89	6,108.80	6,076.79	32.01	190.859		

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit 133 Lateral - Lateral #1 - As Drilled												Offset Site Error:	0.00 ft
Survey Program: 100-Standard Keeper, 2454-MWD SDI												Offset Well Error:	15.00 ft
Reference												Rule Assigned:	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Semi Major Axis Offset	Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (ft)	Separation Factor	Warning
							+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)			
4,900.00	4,846.47	2,528.00	2,526.23	20.02	15.25	-31.10	-592.91	6,269.89	6,130.82	6,098.57	32.25	190.109	
5,000.00	4,945.16	2,528.00	2,526.23	20.45	15.25	-31.10	-592.91	6,269.89	6,154.38	6,121.90	32.48	189.468	
5,100.00	5,043.85	2,544.12	2,541.07	20.88	15.25	-31.14	-590.07	6,275.51	6,178.81	6,146.07	32.74	188.742	
5,200.00	5,142.54	2,560.00	2,555.11	21.31	15.26	-31.19	-586.86	6,282.17	6,205.57	6,172.59	32.98	188.136	
5,300.00	5,241.23	2,560.00	2,555.11	21.74	15.26	-31.19	-586.86	6,282.17	6,233.19	6,200.00	33.20	187.772	
5,400.00	5,339.92	2,560.00	2,555.11	22.17	15.26	-31.19	-586.86	6,282.17	6,262.29	6,228.89	33.40	187.502	
5,500.00	5,438.61	2,560.00	2,555.11	22.61	15.26	-31.19	-586.86	6,282.17	6,292.84	6,259.24	33.59	187.323	
5,600.00	5,537.31	2,560.00	2,555.11	23.04	15.26	-31.19	-586.86	6,282.17	6,324.82	6,291.04	33.78	187.231	
5,700.00	5,636.00	2,560.00	2,555.11	23.47	15.26	-31.19	-586.86	6,282.17	6,358.21	6,324.25	33.96	187.222	
5,800.00	5,734.69	2,560.00	2,555.11	23.90	15.26	-31.19	-586.86	6,282.17	6,393.00	6,358.86	34.13	187.294	
5,900.00	5,833.38	2,560.00	2,555.11	24.33	15.26	-31.19	-586.86	6,282.17	6,429.15	6,394.85	34.30	187.444	
6,000.00	5,932.07	2,560.00	2,555.11	24.76	15.26	-31.19	-586.86	6,282.17	6,466.65	6,432.19	34.46	187.668	
6,100.00	6,030.76	2,560.00	2,555.11	25.19	15.26	-31.19	-586.86	6,282.17	6,505.46	6,470.85	34.61	187.964	
6,200.00	6,129.45	2,560.00	2,555.11	25.62	15.26	-31.19	-586.86	6,282.17	6,545.58	6,510.82	34.76	188.329	
6,300.00	6,228.15	2,576.73	2,569.23	26.05	15.27	-31.24	-583.25	6,290.37	6,586.24	6,551.29	34.94	188.490	
6,370.81	6,298.03	2,593.00	2,582.21	26.35	15.28	-31.29	-579.69	6,299.50	6,616.69	6,581.61	35.08	188.598	
6,400.00	6,326.74	2,593.00	2,582.21	26.48	15.28	-23.89	-579.69	6,299.50	6,628.53	6,593.41	35.12	188.731	
6,450.00	6,375.33	2,593.00	2,582.21	26.73	15.28	-16.44	-579.69	6,299.50	6,646.20	6,611.01	35.19	188.877	
6,500.00	6,422.93	2,593.00	2,582.21	26.99	15.28	-12.19	-579.69	6,299.50	6,660.50	6,625.24	35.26	188.918	
6,550.00	6,469.25	2,593.00	2,582.21	27.29	15.28	-9.49	-579.69	6,299.50	6,671.35	6,636.02	35.33	188.850	
6,600.00	6,513.99	2,593.00	2,582.21	27.61	15.28	-7.64	-579.69	6,299.50	6,678.71	6,643.32	35.40	188.679	
6,650.00	6,556.88	2,593.00	2,582.21	27.96	15.28	-6.29	-579.69	6,299.50	6,682.55	6,647.09	35.47	188.412	
6,690.42	6,590.02	2,593.00	2,582.21	28.27	15.28	-5.45	-579.69	6,299.50	6,683.07	6,647.55	35.52	188.128	
6,700.00	6,597.66	2,593.00	2,582.21	28.34	15.28	-5.27	-579.69	6,299.50	6,682.85	6,647.31	35.54	188.052	
6,746.44	6,633.42	2,593.00	2,582.21	28.73	15.28	-4.52	-579.69	6,299.50	6,679.96	6,644.36	35.60	187.641	
6,750.00	6,636.07	2,593.00	2,582.21	28.76	15.28	-4.47	-579.69	6,299.50	6,679.61	6,644.00	35.60	187.606	
6,799.23	6,671.35	2,593.00	2,582.21	29.20	15.28	-3.82	-579.69	6,299.50	6,672.97	6,637.30	35.67	187.090	
6,800.00	6,671.88	2,593.00	2,582.21	29.21	15.28	-3.81	-579.69	6,299.50	6,672.84	6,637.17	35.67	187.081	
6,850.00	6,704.87	2,593.00	2,582.21	29.71	15.28	-3.26	-579.69	6,299.50	6,662.57	6,626.84	35.73	186.481	
6,900.00	6,734.84	2,593.00	2,582.21	30.25	15.28	-2.79	-579.69	6,299.50	6,648.85	6,613.07	35.78	185.813	
6,950.00	6,761.59	2,593.00	2,582.21	30.85	15.28	-2.37	-579.69	6,299.50	6,631.74	6,595.91	35.83	185.082	
7,000.00	6,784.97	2,593.00	2,582.21	31.50	15.28	-1.98	-579.69	6,299.50	6,611.33	6,575.46	35.87	184.294	
7,050.00	6,804.83	2,593.00	2,582.21	32.20	15.28	-1.61	-579.69	6,299.50	6,587.71	6,551.80	35.91	183.454	
7,100.00	6,821.05	2,593.00	2,582.21	32.96	15.28	-1.25	-579.69	6,299.50	6,560.99	6,525.05	35.94	182.569	
7,150.00	6,833.53	2,593.00	2,582.21	33.77	15.28	-0.88	-579.69	6,299.50	6,531.30	6,495.34	35.96	181.643	
7,200.00	6,842.18	2,593.00	2,582.21	34.62	15.28	-0.49	-579.69	6,299.50	6,498.78	6,462.81	35.97	180.681	
7,250.00	6,846.97	2,593.00	2,582.21	35.52	15.28	-0.05	-579.69	6,299.50	6,463.59	6,427.62	35.97	179.687	
7,286.15	6,848.00	2,593.00	2,582.21	36.18	15.28	0.30	-579.69	6,299.50	6,436.58	6,400.61	35.97	178.944	
7,300.00	6,848.00	2,593.00	2,582.21	36.44	15.28	0.30	-579.69	6,299.50	6,426.00	6,390.04	35.97	178.656	
7,400.00	6,848.03	2,593.00	2,582.21	38.40	15.28	0.30	-579.69	6,299.50	6,349.98	6,314.04	35.94	176.672	
7,500.00	6,848.05	2,593.00	2,582.21	40.49	15.28	0.30	-579.69	6,299.50	6,274.64	6,238.71	35.92	174.666	
7,600.00	6,848.08	2,593.00	2,582.21	42.70	15.28	0.30	-579.69	6,299.50	6,199.98	6,164.07	35.91	172.638	
7,700.00	6,848.10	2,625.00	2,605.49	45.01	15.31	0.22	-573.73	6,320.58	6,125.87	6,089.84	36.03	170.021	
7,800.00	6,848.12	2,625.00	2,605.49	47.40	15.31	0.22	-573.73	6,320.58	6,052.34	6,016.30	36.04	167.942	
7,900.00	6,848.15	2,625.00	2,605.49	49.86	15.31	0.22	-573.73	6,320.58	5,979.58	5,943.52	36.06	165.842	
8,000.00	6,848.17	2,625.00	2,605.49	52.39	15.31	0.22	-573.73	6,320.58	5,907.61	5,871.53	36.08	163.722	
8,100.00	6,848.20	2,625.00	2,605.49	54.96	15.31	0.22	-573.73	6,320.58	5,836.48	5,800.36	36.12	161.583	
8,199.60	6,848.22	2,625.00	2,605.49	57.57	15.31	0.22	-573.73	6,320.58	5,766.47	5,730.30	36.17	159.434	
8,200.00	6,848.22	2,625.00	2,605.49	57.58	15.31	0.22	-573.73	6,320.58	5,766.19	5,730.03	36.17	159.426	
8,299.19	6,848.25	2,625.00	2,605.49	60.22	15.31	0.22	-573.73	6,320.58	5,697.36	5,661.13	36.23	157.269	
8,300.00	6,848.25	2,625.00	2,605.49	60.24	15.31	0.22	-573.73	6,320.58	5,696.80	5,660.57	36.23	157.251	
8,398.78	6,848.27	2,625.00	2,605.49	62.91	15.31	0.22	-573.73	6,320.58	5,629.16	5,592.86	36.30	155.088	

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit 133 Lateral - Lateral #1 - As Drilled											Offset Site Error:	0.00 ft
Survey Program: 100-Standard Keeper, 2454-MWD SDI											Offset Well Error:	15.00 ft
Reference	Offset	Semi Major Axis	Rule Assigned:									
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Highside Toolface (°)	Offset Wellbore Centre					
							+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor
												Warning
8,400.00	6,848.27	2,625.00	2,605.49	62.94	15.31	0.22	-573.73	6,320.58	5,628.33	5,592.03	36.30	155.061
8,498.36	6,848.29	2,625.00	2,605.49	65.62	15.31	0.22	-573.73	6,320.58	5,561.91	5,525.53	36.38	152.893
8,500.00	6,848.29	2,625.00	2,605.49	65.66	15.31	0.22	-573.73	6,320.58	5,560.81	5,524.43	36.38	152.857
8,597.94	6,848.32	2,625.00	2,605.49	68.36	15.31	0.22	-573.73	6,320.58	5,495.64	5,459.17	36.47	150.686
8,600.00	6,848.32	2,625.00	2,605.49	68.42	15.31	0.22	-573.73	6,320.58	5,494.28	5,457.81	36.47	150.641
8,697.52	6,848.34	2,625.00	2,605.49	71.12	15.31	0.22	-573.73	6,320.58	5,430.40	5,393.82	36.58	148.470
8,700.00	6,848.34	2,625.00	2,605.49	71.19	15.31	0.22	-573.73	6,320.58	5,428.78	5,392.21	36.58	148.414
8,797.25	6,848.37	2,655.00	2,624.64	73.91	15.37	0.16	-569.29	6,343.23	5,365.94	5,329.13	36.81	145.756
8,800.00	6,848.37	2,655.00	2,624.64	73.99	15.37	0.16	-569.29	6,343.23	5,364.17	5,327.36	36.82	145.695
8,896.82	6,848.39	2,655.00	2,624.64	76.71	15.37	0.16	-569.29	6,343.23	5,302.42	5,265.48	36.94	143.525
8,900.00	6,848.39	2,655.00	2,624.64	76.80	15.37	0.16	-569.29	6,343.23	5,300.41	5,263.46	36.95	143.454
8,996.38	6,848.41	2,655.00	2,624.64	79.53	15.37	0.16	-569.29	6,343.23	5,240.03	5,202.95	37.09	141.291
9,000.00	6,848.42	2,655.00	2,624.64	79.63	15.37	0.16	-569.29	6,343.23	5,237.78	5,200.69	37.09	141.210
9,095.93	6,848.44	2,655.00	2,624.64	82.36	15.37	0.16	-569.29	6,343.23	5,178.81	5,141.57	37.24	139.059
9,100.00	6,848.44	2,655.00	2,624.64	82.47	15.37	0.16	-569.29	6,343.23	5,176.33	5,139.08	37.25	138.968
9,195.48	6,848.46	2,655.00	2,624.64	85.20	15.37	0.16	-569.29	6,343.23	5,118.79	5,081.38	37.41	136.831
9,200.00	6,848.46	2,655.00	2,624.64	85.33	15.37	0.16	-569.29	6,343.23	5,116.09	5,078.68	37.42	136.731
9,295.03	6,848.49	2,655.00	2,624.64	88.06	15.37	0.16	-569.29	6,343.23	5,060.02	5,022.43	37.59	134.611
9,300.00	6,848.49	2,655.00	2,624.64	88.20	15.37	0.16	-569.29	6,343.23	5,057.12	5,019.52	37.60	134.501
9,394.56	6,848.51	2,655.00	2,624.64	90.92	15.37	0.16	-569.29	6,343.23	5,002.54	4,964.76	37.78	132.402
9,400.00	6,848.51	2,655.00	2,624.64	91.08	15.37	0.16	-569.29	6,343.23	4,999.44	4,961.65	37.79	132.282
9,494.27	6,848.53	2,687.00	2,642.35	93.80	15.45	0.08	-563.42	6,369.20	4,946.17	4,908.05	38.12	129.737
9,500.00	6,848.54	2,687.00	2,642.35	93.97	15.45	0.08	-563.42	6,369.20	4,942.95	4,904.82	38.14	129.612
9,593.80	6,848.56	2,687.00	2,642.35	96.69	15.45	0.08	-563.42	6,369.20	4,890.89	4,852.55	38.34	127.559
9,600.00	6,848.56	2,687.00	2,642.35	96.87	15.45	0.08	-563.42	6,369.20	4,887.49	4,849.14	38.36	127.424
9,693.32	6,848.58	2,687.00	2,642.35	99.58	15.45	0.08	-563.42	6,369.20	4,837.03	4,798.46	38.57	125.403
9,700.00	6,848.58	2,687.00	2,642.35	99.77	15.45	0.08	-563.42	6,369.20	4,833.47	4,794.88	38.59	125.259
9,792.83	6,848.61	2,687.00	2,642.35	102.48	15.45	0.08	-563.42	6,369.20	4,784.64	4,745.83	38.81	123.273
9,800.00	6,848.61	2,687.00	2,642.35	102.69	15.45	0.08	-563.42	6,369.20	4,780.92	4,742.09	38.83	123.121
9,892.33	6,848.63	2,687.00	2,642.35	105.38	15.45	0.08	-563.42	6,369.20	4,733.76	4,694.70	39.07	121.173
9,900.00	6,848.63	2,687.00	2,642.35	105.61	15.45	0.08	-563.42	6,369.20	4,729.91	4,690.82	39.09	121.013
9,991.83	6,848.66	2,687.00	2,642.35	108.29	15.45	0.08	-563.42	6,369.20	4,684.45	4,645.12	39.33	119.107
10,000.00	6,848.66	2,687.00	2,642.35	108.53	15.45	0.08	-563.42	6,369.20	4,680.48	4,641.12	39.35	118.939
10,091.44	6,848.68	2,687.00	2,642.35	111.21	15.45	0.08	-563.42	6,369.20	4,636.70	4,597.10	39.60	117.076
10,100.00	6,848.68	2,702.45	2,649.83	111.46	15.51	0.03	-559.86	6,382.24	4,632.23	4,592.53	39.70	116.681
10,190.94	6,848.70	2,719.00	2,656.98	114.14	15.57	-0.02	-555.75	6,396.58	4,590.18	4,550.15	40.03	114.658
10,200.00	6,848.71	2,719.00	2,656.98	114.40	15.57	-0.02	-555.75	6,396.58	4,586.02	4,545.96	40.06	114.479
10,290.46	6,848.73	2,719.00	2,656.98	117.06	15.57	-0.02	-555.75	6,396.58	4,545.25	4,504.92	40.33	112.710
10,300.00	6,848.73	2,719.00	2,656.98	117.34	15.57	-0.02	-555.75	6,396.58	4,541.03	4,500.67	40.36	112.526
10,389.92	6,848.75	2,719.00	2,656.98	119.99	15.57	-0.02	-555.75	6,396.58	4,502.08	4,461.45	40.63	110.811
10,400.00	6,848.75	2,719.00	2,656.98	120.29	15.57	-0.02	-555.75	6,396.58	4,497.81	4,457.15	40.66	110.621
10,489.38	6,848.78	2,719.00	2,656.98	122.93	15.57	-0.02	-555.75	6,396.58	4,460.72	4,419.78	40.94	108.963
10,500.00	6,848.78	2,719.00	2,656.98	123.24	15.57	-0.02	-555.75	6,396.58	4,456.41	4,415.44	40.97	108.769
10,588.83	6,848.80	2,719.00	2,656.98	125.87	15.57	-0.02	-555.75	6,396.58	4,421.21	4,379.96	41.25	107.170
10,600.00	6,848.80	2,719.00	2,656.98	126.20	15.57	-0.02	-555.75	6,396.58	4,416.89	4,375.60	41.29	106.973
10,688.41	6,848.82	2,734.67	2,662.95	128.81	15.65	-0.08	-551.54	6,410.44	4,383.14	4,341.49	41.65	105.227
10,700.00	6,848.83	2,735.37	2,663.20	129.16	15.65	-0.09	-551.35	6,411.07	4,378.85	4,337.15	41.70	105.019
10,787.86	6,848.85	2,750.00	2,668.07	131.76	15.72	-0.15	-547.10	6,424.19	4,347.25	4,305.19	42.06	103.353
10,800.00	6,848.85	2,750.00	2,668.07	132.12	15.72	-0.15	-547.10	6,424.19	4,342.96	4,300.85	42.10	103.152
10,887.31	6,848.87	2,750.00	2,668.07	134.71	15.72	-0.15	-547.10	6,424.19	4,312.95	4,270.56	42.40	101.731
10,900.00	6,848.88	2,750.00	2,668.07	135.08	15.72	-0.15	-547.10	6,424.19	4,308.72	4,266.28	42.44	101.528
10,986.73	6,848.90	2,750.00	2,668.07	137.66	15.72	-0.15	-547.10	6,424.19	4,280.70	4,237.97	42.73	100.173

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit 133 Lateral - Lateral #1 - As Drilled												Offset Site Error:	0.00 ft
Survey Program: 100-Standard Keeper, 2454-MWD SDI												Offset Well Error:	15.00 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Semi Major Axis Offset	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Distance Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
11,000.00	6,848.90	2,750.00	2,668.07	138.05	15.72	-0.15	-547.10	6,424.19	4,276.55	4,233.77	42.78	99.970	
11,086.37	6,848.92	2,783.00	2,677.81	140.62	15.92	-0.29	-536.87	6,454.01	4,250.05	4,206.79	43.26	98.239	
11,100.00	6,848.92	2,783.00	2,677.81	141.02	15.92	-0.29	-536.87	6,454.01	4,245.98	4,202.67	43.31	98.038	
11,185.95	6,848.94	2,815.00	2,686.78	143.58	16.14	-0.43	-526.77	6,483.02	4,220.90	4,177.10	43.81	96.354	
11,200.00	6,848.95	2,815.00	2,686.78	144.00	16.14	-0.43	-526.77	6,483.02	4,216.92	4,173.06	43.86	96.154	
11,285.53	6,848.97	2,847.00	2,695.29	146.54	16.39	-0.57	-516.85	6,512.23	4,193.28	4,148.91	44.37	94.505	
11,300.00	6,848.97	2,847.00	2,695.29	146.97	16.39	-0.57	-516.85	6,512.23	4,189.39	4,144.97	44.42	94.306	
11,384.91	6,848.99	2,847.00	2,695.29	149.50	16.39	-0.57	-516.85	6,512.23	4,167.51	4,122.78	44.73	93.170	
11,400.00	6,849.00	2,847.00	2,695.29	149.95	16.39	-0.57	-516.85	6,512.23	4,163.79	4,119.01	44.79	92.973	
11,484.50	6,849.02	2,879.00	2,702.65	152.47	16.68	-0.71	-507.07	6,541.79	4,143.64	4,098.31	45.33	91.419	
11,500.00	6,849.02	2,879.00	2,702.65	152.93	16.68	-0.71	-507.07	6,541.79	4,140.06	4,094.68	45.38	91.224	
11,583.87	6,849.04	2,879.00	2,702.65	155.43	16.68	-0.71	-507.07	6,541.79	4,121.65	4,075.96	45.70	90.196	
11,600.00	6,849.04	2,879.00	2,702.65	155.91	16.68	-0.71	-507.07	6,541.79	4,118.30	4,072.54	45.76	90.003	
11,683.37	6,849.07	2,894.11	2,705.64	158.40	16.83	-0.78	-502.53	6,555.89	4,101.72	4,055.53	46.19	88.797	
11,700.00	6,849.07	2,896.16	2,706.01	158.90	16.85	-0.79	-501.92	6,557.81	4,098.59	4,052.31	46.27	88.575	
11,782.81	6,849.09	2,911.00	2,708.55	161.37	17.00	-0.85	-497.48	6,571.75	4,083.87	4,037.15	46.71	87.422	
11,800.00	6,849.09	2,911.00	2,708.55	161.88	17.00	-0.85	-497.48	6,571.75	4,080.97	4,034.19	46.78	87.234	
11,882.38	6,849.11	2,943.00	2,713.51	164.34	17.34	-0.98	-488.12	6,601.94	4,067.88	4,020.49	47.39	85.847	
11,900.00	6,849.12	2,943.00	2,713.51	164.87	17.34	-0.98	-488.12	6,601.94	4,065.20	4,017.74	47.46	85.660	
11,981.84	6,849.14	2,943.00	2,713.51	167.32	17.34	-0.98	-488.12	6,601.94	4,053.75	4,005.95	47.80	84.812	
12,000.00	6,849.14	2,957.51	2,715.54	167.86	17.51	-1.04	-483.93	6,615.68	4,051.24	4,003.24	48.00	84.394	
12,081.30	6,849.16	2,975.00	2,717.56	170.29	17.72	-1.11	-478.84	6,632.29	4,041.50	3,992.99	48.51	83.306	
12,100.00	6,849.17	2,975.00	2,717.56	170.85	17.72	-1.11	-478.84	6,632.29	4,039.42	3,990.83	48.60	83.122	
12,180.66	6,849.19	2,975.00	2,717.56	173.26	17.72	-1.11	-478.84	6,632.29	4,031.45	3,982.49	48.96	82.343	
12,200.00	6,849.19	2,975.00	2,717.56	173.84	17.72	-1.11	-478.84	6,632.29	4,029.78	3,980.73	49.05	82.160	
12,280.01	6,849.21	2,975.00	2,717.56	176.24	17.72	-1.11	-478.84	6,632.29	4,023.83	3,974.41	49.42	81.416	
12,300.00	6,849.21	2,975.00	2,717.56	176.84	17.72	-1.11	-478.84	6,632.29	4,022.59	3,973.07	49.52	81.231	
12,379.64	6,849.23	3,007.00	2,719.42	179.22	18.12	-1.25	-469.17	6,662.73	4,018.32	3,968.09	50.23	80.004	
12,400.00	6,849.24	3,007.00	2,719.42	179.83	18.12	-1.25	-469.17	6,662.73	4,017.41	3,967.07	50.33	79.819	
12,478.85	6,849.26	3,007.00	2,719.42	182.19	18.12	-1.25	-469.17	6,662.73	4,014.85	3,964.10	50.75	79.112	
12,500.00	6,849.26	3,007.00	2,719.42	182.83	18.12	-1.25	-469.17	6,662.73	4,014.43	3,963.56	50.86	78.926	
12,600.00	6,849.29	3,007.00	2,719.42	185.82	18.12	-1.25	-469.17	6,662.73	4,013.94	3,962.52	51.42	78.062 CC	
12,700.00	6,849.31	3,039.00	2,719.30	188.82	18.54	-1.40	-459.08	6,693.09	4,015.42	3,963.12	52.30	76.776	
12,800.00	6,849.34	3,071.00	2,718.37	191.82	18.98	-1.54	-449.04	6,723.46	4,018.95	3,965.75	53.20	75.545	
12,900.00	6,849.36	3,154.54	2,715.04	194.82	20.23	-1.87	-425.35	6,803.49	4,023.88	3,969.25	54.62	73.664	
13,000.00	6,849.38	3,551.00	2,713.74	197.82	27.44	-3.24	-328.18	7,187.57	4,026.23	3,966.60	59.62	67.527	
13,080.27	6,849.40	3,743.00	2,723.35	200.23	31.42	-3.82	-287.43	7,374.91	4,023.12	3,960.75	62.38	64.497	
13,100.00	6,849.41	3,743.00	2,723.35	200.83	31.42	-3.82	-287.43	7,374.91	4,022.18	3,959.68	62.50	64.352	
13,179.27	6,849.43	3,774.00	2,725.08	203.21	32.07	-3.93	-279.71	7,404.88	4,019.05	3,955.65	63.40	63.392	
13,200.00	6,849.43	3,774.00	2,725.08	203.83	32.07	-3.93	-279.71	7,404.88	4,018.42	3,954.89	63.53	63.250	
13,278.81	6,849.45	3,806.00	2,726.48	206.20	32.75	-4.05	-271.46	7,435.77	4,016.55	3,952.09	64.45	62.320	
13,300.00	6,849.46	3,806.00	2,726.48	206.83	32.75	-4.05	-271.46	7,435.77	4,016.26	3,951.68	64.59	62.184	
13,400.00	6,849.48	3,838.00	2,727.30	209.84	33.44	-4.18	-262.82	7,466.57	4,015.91	3,950.26	65.65	61.168 ES	
13,500.00	6,849.50	3,870.00	2,727.37	212.84	34.12	-4.30	-253.74	7,497.25	4,017.57	3,950.84	66.73	60.203	
13,600.00	6,849.53	3,901.00	2,726.99	215.85	34.79	-4.43	-244.89	7,526.96	4,020.91	3,953.10	67.81	59.300	
13,700.00	6,849.55	3,949.00	2,725.84	218.86	35.84	-4.62	-231.25	7,572.97	4,025.71	3,956.58	69.13	58.232	
13,800.00	6,849.58	4,043.32	2,722.72	221.87	37.89	-5.00	-204.02	7,663.21	4,031.64	3,960.45	71.19	56.632	
13,900.00	6,849.60	4,221.00	2,720.79	224.87	41.82	-5.71	-153.41	7,833.50	4,034.90	3,960.26	74.64	54.059	
14,000.00	6,849.63	4,253.00	2,720.34	227.88	42.54	-5.83	-144.61	7,864.26	4,039.55	3,963.72	75.82	53.275	
14,100.00	6,849.65	4,307.94	2,718.64	230.89	43.78	-6.04	-129.72	7,917.11	4,045.70	3,968.31	77.39	52.278	
14,200.00	6,849.67	4,350.00	2,716.64	233.90	44.73	-6.19	-118.73	7,957.66	4,053.33	3,974.59	78.74	51.477	
14,300.00	6,849.70	4,709.74	2,708.76	236.92	52.91	-7.60	-16.89	8,302.37	4,060.53	3,974.71	85.81	47.319	

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit 133 Lateral - Lateral #1 - As Drilled													Offset Site Error:	0.00 ft
Survey Program: 100-Standard Keeper, 2454-MWD SDI							Rule Assigned:						Offset Well Error:	15.00 ft
Reference	Offset	Semi Major Axis		Offset Wellbore Centre		Distance				Warning				
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
14,400.00	6,849.72	4,721.00	2,708.97	239.93	53.17	-7.64	-13.55	8,313.12	4,063.72	3,976.91	86.81	46.814		
14,500.00	6,849.75	4,721.00	2,708.97	242.94	53.17	-7.64	-13.55	8,313.12	4,069.35	3,981.79	87.56	46.476		
14,600.00	6,849.77	4,721.00	2,708.97	245.95	53.17	-7.64	-13.55	8,313.12	4,077.42	3,989.14	88.28	46.188		
14,700.00	6,849.80	4,721.00	2,708.97	248.96	53.17	-7.64	-13.55	8,313.12	4,087.93	3,998.97	88.96	45.950		
14,800.00	6,849.82	4,721.00	2,708.97	251.98	53.17	-7.64	-13.55	8,313.12	4,100.85	4,011.24	89.61	45.761		
14,900.00	6,849.84	4,721.00	2,708.97	254.99	53.17	-7.64	-13.55	8,313.12	4,116.16	4,025.93	90.23	45.620		
15,000.00	6,849.87	4,721.00	2,708.97	258.01	53.17	-7.64	-13.55	8,313.12	4,133.83	4,043.03	90.80	45.526		
15,100.00	6,849.89	4,721.00	2,708.97	261.02	53.17	-7.64	-13.55	8,313.12	4,153.84	4,062.50	91.34	45.477		
15,200.00	6,849.92	4,721.00	2,708.97	264.04	53.17	-7.64	-13.55	8,313.12	4,176.14	4,084.30	91.84	45.472 SF		
15,300.00	6,849.94	4,721.00	2,708.97	267.05	53.17	-7.64	-13.55	8,313.12	4,200.71	4,108.41	92.30	45.510		
15,400.00	6,849.97	4,721.00	2,708.97	270.07	53.17	-7.64	-13.55	8,313.12	4,227.50	4,134.77	92.73	45.590		
15,500.00	6,849.99	4,721.00	2,708.97	273.08	53.17	-7.64	-13.55	8,313.12	4,256.47	4,163.36	93.12	45.711		
15,600.00	6,850.01	4,721.00	2,708.97	276.10	53.17	-7.64	-13.55	8,313.12	4,287.58	4,194.11	93.47	45.872		
15,700.00	6,850.04	4,721.00	2,708.97	279.12	53.17	-7.64	-13.55	8,313.12	4,320.78	4,227.00	93.79	46.070		
15,800.00	6,850.06	4,721.00	2,708.97	282.14	53.17	-7.64	-13.55	8,313.12	4,356.03	4,261.96	94.07	46.307		
15,900.00	6,850.09	4,721.00	2,708.97	285.15	53.17	-7.64	-13.55	8,313.12	4,393.26	4,298.94	94.32	46.579		
16,000.00	6,850.11	4,721.00	2,708.97	288.17	53.17	-7.64	-13.55	8,313.12	4,432.44	4,337.91	94.54	46.887		
16,100.00	6,850.13	4,721.00	2,708.97	291.19	53.17	-7.64	-13.55	8,313.12	4,473.52	4,378.80	94.72	47.228		
16,200.00	6,850.16	4,721.00	2,708.97	294.21	53.17	-7.64	-13.55	8,313.12	4,516.43	4,421.55	94.88	47.603		
16,300.00	6,850.18	4,721.00	2,708.97	297.23	53.17	-7.64	-13.55	8,313.12	4,561.13	4,466.13	95.01	48.009		
16,400.00	6,850.21	4,721.00	2,708.97	300.25	53.17	-7.64	-13.55	8,313.12	4,607.57	4,512.47	95.11	48.446		
16,500.00	6,850.23	4,721.00	2,708.97	303.27	53.17	-7.64	-13.55	8,313.12	4,655.70	4,560.52	95.18	48.913		
16,600.00	6,850.26	4,721.00	2,708.97	306.28	53.17	-7.64	-13.55	8,313.12	4,705.46	4,610.22	95.24	49.408		
16,700.00	6,850.28	4,721.00	2,708.97	309.30	53.17	-7.64	-13.55	8,313.12	4,756.80	4,661.53	95.27	49.932		
16,800.00	6,850.30	4,721.00	2,708.97	312.32	53.17	-7.64	-13.55	8,313.12	4,809.67	4,714.40	95.28	50.482		
16,900.00	6,850.33	4,721.00	2,708.97	315.35	53.17	-7.64	-13.55	8,313.12	4,864.02	4,768.76	95.26	51.058		
17,000.00	6,850.35	4,721.00	2,708.97	318.37	53.17	-7.64	-13.55	8,313.12	4,919.81	4,824.57	95.24	51.659		
17,100.00	6,850.38	4,721.00	2,708.97	321.39	53.17	-7.64	-13.55	8,313.12	4,976.98	4,881.79	95.19	52.285		
17,200.00	6,850.40	4,721.00	2,708.97	324.41	53.17	-7.64	-13.55	8,313.12	5,035.49	4,940.36	95.13	52.934		
17,300.00	6,850.43	4,721.00	2,708.97	327.43	53.17	-7.64	-13.55	8,313.12	5,095.28	5,000.23	95.05	53.605		
17,400.00	6,850.45	4,721.00	2,708.97	330.45	53.17	-7.64	-13.55	8,313.12	5,156.33	5,061.36	94.96	54.298		
17,500.00	6,850.47	4,721.00	2,708.97	333.47	53.17	-7.64	-13.55	8,313.12	5,218.57	5,123.71	94.86	55.012		
17,600.00	6,850.50	4,721.00	2,708.97	336.49	53.17	-7.64	-13.55	8,313.12	5,281.98	5,187.23	94.75	55.746		
17,700.00	6,850.52	4,721.00	2,708.97	339.52	53.17	-7.64	-13.55	8,313.12	5,346.50	5,251.88	94.63	56.500		
17,800.00	6,850.55	4,721.00	2,708.97	342.54	53.17	-7.64	-13.55	8,313.12	5,412.11	5,317.61	94.50	57.272		
17,900.00	6,850.57	4,721.00	2,708.97	345.56	53.17	-7.64	-13.55	8,313.12	5,478.75	5,384.39	94.36	58.062		
18,000.00	6,850.59	4,721.00	2,708.97	348.58	53.17	-7.64	-13.55	8,313.12	5,546.40	5,452.18	94.21	58.870		
18,100.00	6,850.62	4,721.00	2,708.97	351.61	53.17	-7.64	-13.55	8,313.12	5,615.01	5,520.94	94.06	59.694		
18,200.00	6,850.64	4,721.00	2,708.97	354.63	53.17	-7.64	-13.55	8,313.12	5,684.55	5,590.64	93.91	60.535		
18,300.00	6,850.67	4,721.00	2,708.97	357.65	53.17	-7.64	-13.55	8,313.12	5,754.99	5,661.24	93.74	61.391		
18,400.00	6,850.69	4,721.00	2,708.97	360.67	53.17	-7.64	-13.55	8,313.12	5,826.29	5,732.72	93.58	62.262		
18,500.00	6,850.72	4,721.00	2,708.97	363.70	53.17	-7.64	-13.55	8,313.12	5,898.43	5,805.02	93.41	63.147		
18,600.00	6,850.74	4,721.00	2,708.97	366.72	53.17	-7.64	-13.55	8,313.12	5,971.37	5,878.14	93.24	64.046		
18,700.00	6,850.76	4,721.00	2,708.97	369.75	53.17	-7.64	-13.55	8,313.12	6,045.09	5,952.03	93.06	64.958		
18,800.00	6,850.79	4,721.00	2,708.97	372.77	53.17	-7.64	-13.55	8,313.12	6,119.55	6,026.66	92.88	65.883		
18,900.00	6,850.81	4,721.00	2,708.97	375.79	53.17	-7.64	-13.55	8,313.12	6,194.73	6,102.02	92.71	66.820		
19,000.00	6,850.84	4,721.00	2,708.97	378.82	53.17	-7.64	-13.55	8,313.12	6,270.60	6,178.08	92.53	67.769		
19,100.00	6,850.86	4,721.00	2,708.97	381.84	53.17	-7.64	-13.55	8,313.12	6,347.15	6,254.80	92.35	68.730		
19,200.00	6,850.89	4,721.00	2,708.97	384.87	53.17	-7.64	-13.55	8,313.12	6,424.33	6,332.16	92.17	69.701		
19,300.00	6,850.91	4,721.00	2,708.97	387.89	53.17	-7.64	-13.55	8,313.12	6,502.14	6,410.15	91.99	70.683		
19,400.00	6,850.93	4,721.00	2,708.97	390.91	53.17	-7.64	-13.55	8,313.12	6,580.55	6,488.74	91.81	71.674		
19,500.00	6,850.96	4,721.00	2,708.97	393.94	53.17	-7.64	-13.55	8,313.12	6,659.54	6,567.91	91.63	72.675		

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit 133 Lateral - Lateral #1 - As Drilled												Offset Site Error:	0.00 ft
Survey Program: 100-Standard Keeper, 2454-MWD SDI												Offset Well Error:	15.00 ft
Reference		Offset		Semi Major Axis		Offset Wellbore Centre		Distance		Rule Assigned:		Warning	
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	+N/-S	+E/-W	Between Centres	Between Ellipses	Minimum Separation	Separation Factor	
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
19,600.00	6,850.98	4,721.00	2,708.97	396.96	53.17	-7.64	-13.55	8,313.12	6,739.08	6,647.63	91.46	73.686	
19,673.90	6,851.00	4,721.00	2,708.97	399.20	53.17	-7.64	-13.55	8,313.12	6,798.22	6,706.89	91.33	74.438	
19,700.00	6,851.01	4,721.00	2,708.97	399.99	53.17	-7.64	-13.55	8,313.12	6,819.17	6,727.89	91.28	74.704	
19,773.90	6,851.02	4,721.00	2,708.97	402.22	53.17	-7.64	-13.55	8,313.12	6,878.69	6,787.53	91.15	75.463	



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit 133 Lateral - Original Hole - As Drilled													Offset Site Error:	0.00 ft
Survey Program: 100-Standard Keeper													Offset Well Error:	15.00 ft
Reference	Offset	Semi Major Axis		Distance		Rule Assigned:		Warning						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	0.00	0.00	0.00	15.00	95.63	-617.11	6,262.80	6,294.22					
100.00	100.00	0.00	0.00	0.30	15.00	95.63	-617.11	6,262.80	6,293.16	6,277.86	15.30	411.384		
200.00	200.00	129.68	129.68	0.66	15.00	95.63	-616.93	6,262.12	6,292.60	6,276.95	15.66	401.922		
300.00	300.00	200.00	200.00	1.01	15.00	95.62	-616.64	6,261.77	6,292.08	6,276.06	16.02	392.868		
400.00	400.00	294.78	294.78	1.37	15.00	95.62	-616.35	6,261.55	6,291.82	6,275.44	16.38	384.210		
500.00	500.00	391.65	391.64	1.73	15.01	95.62	-616.28	6,261.40	6,291.66	6,274.92	16.74	375.905		
600.00	599.98	488.73	488.72	2.08	15.01	-29.12	-616.24	6,261.29	6,290.02	6,272.94	17.09	368.119		
700.00	699.84	582.76	582.75	2.42	15.02	-29.19	-616.12	6,261.26	6,285.40	6,267.97	17.43	360.597		
800.00	799.45	667.63	667.62	2.77	15.02	-29.30	-615.73	6,261.39	6,277.90	6,260.12	17.78	353.094		
900.00	898.70	762.72	762.71	3.13	15.02	-29.46	-614.88	6,261.76	6,267.57	6,249.43	18.14	345.591		
963.97	961.95	829.66	829.64	3.37	15.03	-29.60	-614.07	6,262.03	6,259.36	6,240.99	18.37	340.756		
1,000.00	997.50	868.22	868.20	3.51	15.03	-29.63	-613.65	6,262.15	6,254.37	6,235.87	18.50	338.057		
1,100.00	1,096.19	960.61	960.59	3.90	15.03	-29.70	-612.86	6,262.42	6,240.53	6,221.66	18.86	330.805		
1,200.00	1,194.89	1,056.16	1,056.13	4.30	15.04	-29.78	-612.31	6,262.82	6,226.84	6,207.60	19.23	323.747		
1,300.00	1,293.58	1,178.00	1,177.97	4.70	15.05	-29.88	-611.24	6,263.18	6,213.03	6,193.42	19.61	316.862		
1,400.00	1,392.27	1,268.91	1,268.88	5.11	15.06	-29.96	-610.40	6,263.23	6,198.99	6,179.00	19.99	310.177		
1,500.00	1,490.96	1,366.38	1,366.34	5.52	15.07	-30.04	-609.43	6,263.47	6,185.14	6,164.77	20.37	303.707		
1,600.00	1,589.65	1,467.70	1,467.66	5.94	15.08	-30.13	-608.28	6,263.66	6,171.22	6,150.48	20.75	297.437		
1,700.00	1,688.34	1,578.48	1,578.43	6.36	15.10	-30.22	-607.22	6,263.77	6,157.25	6,136.12	21.13	291.363		
1,800.00	1,787.03	1,687.02	1,686.97	6.78	15.12	-30.32	-606.03	6,263.64	6,143.07	6,121.55	21.52	285.471		
1,900.00	1,885.73	1,830.13	1,830.06	7.20	15.14	-30.44	-604.17	6,262.87	6,128.48	6,106.57	21.91	279.750		
2,000.00	1,984.42	1,938.14	1,938.06	7.62	15.16	-30.54	-603.09	6,261.72	6,113.39	6,091.10	22.30	274.171		
2,100.00	2,083.11	2,024.13	2,024.04	8.04	15.17	-30.61	-602.39	6,260.86	6,098.41	6,075.72	22.69	268.760		
2,200.00	2,181.80	2,107.14	2,107.04	8.46	15.18	-30.68	-601.87	6,260.23	6,083.68	6,060.60	23.09	263.526		
2,300.00	2,280.49	2,217.19	2,217.09	8.89	15.20	-30.77	-601.15	6,259.44	6,069.02	6,045.54	23.48	258.462		
2,400.00	2,379.18	2,331.79	2,331.67	9.31	15.23	-30.87	-600.06	6,258.24	6,054.00	6,030.12	23.88	253.537		
2,500.00	2,477.87	2,414.94	2,414.82	9.74	15.24	-30.94	-599.45	6,257.46	6,039.13	6,014.85	24.28	248.755		
2,600.00	2,576.56	2,519.74	2,519.61	10.16	15.27	-31.03	-598.83	6,256.49	6,024.30	5,999.62	24.68	244.118		
2,700.00	2,675.26	2,617.00	2,616.87	10.59	15.29	-31.11	-598.17	6,255.60	6,009.49	5,984.41	25.08	239.618		
2,800.00	2,773.95	2,750.00	2,749.85	11.02	15.31	-31.22	-598.64	6,253.60	5,994.10	5,968.62	25.48	235.235		
2,900.00	2,872.64	2,750.00	2,749.85	11.44	15.31	-31.22	-598.64	6,253.60	5,979.54	5,953.65	25.89	230.986		
3,000.00	2,971.33	2,750.00	2,749.85	11.87	15.31	-31.22	-598.64	6,253.60	5,966.62	5,940.33	26.29	226.971		
3,100.00	3,070.02	2,750.00	2,749.85	12.30	15.31	-31.22	-598.64	6,253.60	5,955.35	5,928.67	26.68	223.180		
3,200.00	3,168.71	2,750.00	2,749.85	12.73	15.31	-31.22	-598.64	6,253.60	5,945.74	5,918.67	27.07	219.605		
3,300.00	3,267.40	2,750.00	2,749.85	13.16	15.31	-31.22	-598.64	6,253.60	5,937.80	5,910.35	27.46	216.239		
3,400.00	3,366.10	2,750.00	2,749.85	13.58	15.31	-31.22	-598.64	6,253.60	5,931.54	5,903.70	27.84	213.073		
3,500.00	3,464.79	2,750.00	2,749.85	14.01	15.31	-31.22	-598.64	6,253.60	5,926.96	5,898.75	28.21	210.100		
3,600.00	3,563.48	2,750.00	2,749.85	14.44	15.31	-31.22	-598.64	6,253.60	5,924.06	5,895.48	28.58	207.313		
3,700.00	3,662.17	2,750.00	2,749.85	14.87	15.31	-31.22	-598.64	6,253.60	5,922.85	5,893.91	28.93	204.706		
3,721.70	3,683.59	2,750.00	2,749.85	14.96	15.31	-31.22	-598.64	6,253.60	5,922.81	5,893.80	29.01	204.163		
3,800.00	3,760.86	2,750.00	2,749.85	15.30	15.31	-31.22	-598.64	6,253.60	5,923.32	5,894.04	29.28	202.271		
3,900.00	3,859.55	2,750.00	2,749.85	15.73	15.31	-31.22	-598.64	6,253.60	5,925.49	5,895.86	29.63	200.004		
4,000.00	3,958.24	2,750.00	2,749.85	16.16	15.31	-31.22	-598.64	6,253.60	5,929.34	5,899.38	29.96	197.897		
4,100.00	4,056.94	2,750.00	2,749.85	16.59	15.31	-31.22	-598.64	6,253.60	5,934.87	5,904.59	30.29	195.945		
4,200.00	4,155.63	2,750.00	2,749.85	17.02	15.31	-31.22	-598.64	6,253.60	5,942.09	5,911.48	30.61	194.142		
4,300.00	4,254.32	2,750.00	2,749.85	17.45	15.31	-31.22	-598.64	6,253.60	5,950.97	5,920.05	30.92	192.484		
4,400.00	4,353.01	2,750.00	2,749.85	17.88	15.31	-31.22	-598.64	6,253.60	5,961.52	5,930.30	31.22	190.965		
4,500.00	4,451.70	2,750.00	2,749.85	18.30	15.31	-31.22	-598.64	6,253.60	5,973.72	5,942.21	31.51	189.580		
4,600.00	4,550.39	2,750.00	2,749.85	18.73	15.31	-31.22	-598.64	6,253.60	5,987.57	5,955.78	31.79	188.324		
4,700.00	4,649.08	2,750.00	2,749.85	19.16	15.31	-31.22	-598.64	6,253.60	6,003.05	5,970.98	32.07	187.194		
4,800.00	4,747.77	2,750.00	2,749.85	19.59	15.31	-31.22	-598.64	6,253.60	6,020.16	5,987.82	32.33	186.184		
4,900.00	4,846.47	2,750.00	2,749.85	20.02	15.31	-31.22	-598.64	6,253.60	6,038.87	6,006.28	32.59	185.291		

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit 133 Lateral - Original Hole - As Drilled													Offset Site Error:	0.00 ft
Survey Program: 100-Standard Keeper							Rule Assigned:						Offset Well Error:	15.00 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
5,000.00	4,945.16	2,750.00	2,749.85	20.45	15.31	-31.22	-598.64	6,253.60	6,059.17	6,026.34	32.84	184.509		
5,100.00	5,043.85	2,750.00	2,749.85	20.88	15.31	-31.22	-598.64	6,253.60	6,081.06	6,047.98	33.08	183.837		
5,200.00	5,142.54	2,750.00	2,749.85	21.31	15.31	-31.22	-598.64	6,253.60	6,104.50	6,071.19	33.31	183.269		
5,300.00	5,241.23	2,750.00	2,749.85	21.74	15.31	-31.22	-598.64	6,253.60	6,129.48	6,095.95	33.53	182.801		
5,400.00	5,339.92	2,750.00	2,749.85	22.17	15.31	-31.22	-598.64	6,253.60	6,155.99	6,122.24	33.74	182.431		
5,500.00	5,438.61	2,750.00	2,749.85	22.61	15.31	-31.22	-598.64	6,253.60	6,184.00	6,150.05	33.95	182.155		
5,600.00	5,537.31	2,750.00	2,749.85	23.04	15.31	-31.22	-598.64	6,253.60	6,213.49	6,179.35	34.15	181.969		
5,700.00	5,636.00	2,750.00	2,749.85	23.47	15.31	-31.22	-598.64	6,253.60	6,244.45	6,210.12	34.33	181.870		
5,800.00	5,734.69	2,750.00	2,749.85	23.90	15.31	-31.22	-598.64	6,253.60	6,276.85	6,242.33	34.52	181.855		
5,900.00	5,833.38	2,750.00	2,749.85	24.33	15.31	-31.22	-598.64	6,253.60	6,310.66	6,275.97	34.69	181.921		
6,000.00	5,932.07	2,750.00	2,749.85	24.76	15.31	-31.22	-598.64	6,253.60	6,345.87	6,311.02	34.86	182.065		
6,100.00	6,030.76	2,750.00	2,749.85	25.19	15.31	-31.22	-598.64	6,253.60	6,382.46	6,347.44	35.01	182.283		
6,200.00	6,129.45	2,750.00	2,749.85	25.62	15.31	-31.22	-598.64	6,253.60	6,420.39	6,385.22	35.17	182.573		
6,300.00	6,228.15	2,750.00	2,749.85	26.05	15.31	-31.22	-598.64	6,253.60	6,459.65	6,424.34	35.31	182.933		
6,370.81	6,298.03	2,750.00	2,749.85	26.35	15.31	-31.22	-598.64	6,253.60	6,488.23	6,452.82	35.41	183.228		
6,400.00	6,326.74	2,750.00	2,749.85	26.48	15.31	-23.82	-598.64	6,253.60	6,499.60	6,464.15	35.45	183.347		
6,450.00	6,375.33	2,750.00	2,749.85	26.73	15.31	-16.36	-598.64	6,253.60	6,516.43	6,480.91	35.52	183.470		
6,500.00	6,422.93	2,750.00	2,749.85	26.99	15.31	-12.11	-598.64	6,253.60	6,529.87	6,494.29	35.59	183.489		
6,550.00	6,469.25	2,750.00	2,749.85	27.29	15.31	-9.41	-598.64	6,253.60	6,539.87	6,504.21	35.66	183.401		
6,600.00	6,513.99	2,750.00	2,749.85	27.61	15.31	-7.55	-598.64	6,253.60	6,546.38	6,510.65	35.73	183.212		
6,650.00	6,556.88	2,750.00	2,749.85	27.96	15.31	-6.20	-598.64	6,253.60	6,549.37	6,513.56	35.80	182.927		
6,692.73	6,591.87	2,750.00	2,749.85	28.28	15.31	-5.30	-598.64	6,253.60	6,549.12	6,513.25	35.86	182.613		
6,700.00	6,597.66	2,750.00	2,749.85	28.34	15.31	-5.17	-598.64	6,253.60	6,548.82	6,512.94	35.87	182.553		
6,747.85	6,634.47	2,750.00	2,749.85	28.74	15.31	-4.39	-598.64	6,253.60	6,544.98	6,509.05	35.94	182.117		
6,750.00	6,636.07	2,750.00	2,749.85	28.76	15.31	-4.36	-598.64	6,253.60	6,544.74	6,508.79	35.94	182.095		
6,800.00	6,671.88	2,750.00	2,749.85	29.21	15.31	-3.70	-598.64	6,253.60	6,537.14	6,501.13	36.01	181.558		
6,850.00	6,704.87	2,750.00	2,749.85	29.71	15.31	-3.14	-598.64	6,253.60	6,526.07	6,490.00	36.07	180.949		
6,900.00	6,734.84	2,750.00	2,749.85	30.25	15.31	-2.66	-598.64	6,253.60	6,511.56	6,475.44	36.12	180.273		
6,950.00	6,761.59	2,750.00	2,749.85	30.85	15.31	-2.23	-598.64	6,253.60	6,493.69	6,457.53	36.17	179.535		
7,000.00	6,784.97	2,750.00	2,749.85	31.50	15.31	-1.83	-598.64	6,253.60	6,472.55	6,436.34	36.21	178.742		
7,050.00	6,804.83	2,750.00	2,749.85	32.20	15.31	-1.45	-598.64	6,253.60	6,448.22	6,411.98	36.25	177.899		
7,100.00	6,821.05	2,750.00	2,749.85	32.96	15.31	-1.07	-598.64	6,253.60	6,420.83	6,384.56	36.27	177.011		
7,150.00	6,833.53	2,750.00	2,749.85	33.77	15.31	-0.68	-598.64	6,253.60	6,390.51	6,354.21	36.29	176.082		
7,200.00	6,842.18	2,750.00	2,749.85	34.62	15.31	-0.27	-598.64	6,253.60	6,357.39	6,321.09	36.30	175.118		
7,250.00	6,846.97	2,750.00	2,749.85	35.52	15.31	0.20	-598.64	6,253.60	6,321.65	6,285.34	36.31	174.123		
7,286.15	6,848.00	2,750.00	2,749.85	36.18	15.31	0.59	-598.64	6,253.60	6,294.27	6,257.97	36.30	173.380		
7,300.00	6,848.00	2,750.00	2,749.85	36.44	15.31	0.59	-598.64	6,253.60	6,283.55	6,247.25	36.30	173.091		
7,400.00	6,848.03	2,750.00	2,749.85	38.40	15.31	0.59	-598.64	6,253.60	6,206.53	6,170.26	36.27	171.103		
7,500.00	6,848.05	2,750.00	2,749.85	40.49	15.31	0.59	-598.64	6,253.60	6,130.17	6,093.91	36.25	169.095		
7,600.00	6,848.08	2,750.00	2,749.85	42.70	15.31	0.59	-598.64	6,253.60	6,054.49	6,018.25	36.24	167.070		
7,700.00	6,848.10	2,750.00	2,749.85	45.01	15.31	0.59	-598.64	6,253.60	5,979.53	5,943.30	36.23	165.025		
7,800.00	6,848.12	2,750.00	2,749.85	47.40	15.31	0.59	-598.64	6,253.60	5,905.32	5,869.08	36.24	162.963		
7,900.00	6,848.15	2,750.00	2,749.85	49.86	15.31	0.59	-598.64	6,253.60	5,831.87	5,795.62	36.25	160.882		
8,000.00	6,848.17	2,750.00	2,749.85	52.39	15.31	0.59	-598.64	6,253.60	5,759.22	5,722.95	36.27	158.784		
8,100.00	6,848.20	2,750.00	2,749.85	54.96	15.31	0.59	-598.64	6,253.60	5,687.41	5,651.10	36.30	156.668		
8,199.92	6,848.22	2,750.00	2,749.85	57.58	15.31	0.59	-598.64	6,253.60	5,616.51	5,580.17	36.34	154.539		
8,200.00	6,848.22	2,750.00	2,749.85	57.58	15.31	0.59	-598.64	6,253.60	5,616.45	5,580.11	36.34	154.537		
8,299.49	6,848.25	2,750.00	2,749.85	60.23	15.31	0.59	-598.64	6,253.60	5,546.75	5,510.35	36.40	152.402		
8,300.00	6,848.25	2,750.00	2,749.85	60.24	15.31	0.59	-598.64	6,253.60	5,546.39	5,510.00	36.40	152.391		
8,399.07	6,848.27	2,750.00	2,749.85	62.91	15.31	0.59	-598.64	6,253.60	5,477.90	5,441.45	36.46	150.251		
8,400.00	6,848.27	2,750.00	2,749.85	62.94	15.31	0.59	-598.64	6,253.60	5,477.26	5,440.81	36.46	150.231		
8,498.64	6,848.29	2,750.00	2,749.85	65.63	15.31	0.59	-598.64	6,253.60	5,410.02	5,373.49	36.53	148.089		

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit 133 Lateral - Original Hole - As Drilled													Offset Site Error:	0.00 ft
Survey Program:		100-Standard Keeper					Rule Assigned:				Offset Well Error:	15.00 ft		
Reference	Offset	Semi Major Axis		Offset Wellbore Centre		Distance				Warning				
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
8,500.00	6,848.29	2,750.00	2,749.85	65.66	15.31	0.59	-598.64	6,253.60	5,409.10	5,372.57	36.53	148.059		
8,598.20	6,848.32	2,750.00	2,749.85	68.37	15.31	0.59	-598.64	6,253.60	5,343.14	5,306.52	36.62	145.917		
8,600.00	6,848.32	2,750.00	2,749.85	68.42	15.31	0.59	-598.64	6,253.60	5,341.94	5,305.32	36.62	145.877		
8,697.77	6,848.34	2,750.00	2,749.85	71.13	15.31	0.59	-598.64	6,253.60	5,277.28	5,240.57	36.72	143.736		
8,700.00	6,848.34	2,750.00	2,749.85	71.19	15.31	0.59	-598.64	6,253.60	5,275.82	5,239.10	36.72	143.687		
8,797.32	6,848.37	2,750.00	2,749.85	73.91	15.31	0.59	-598.64	6,253.60	5,212.50	5,175.68	36.82	141.550		
8,800.00	6,848.37	2,750.00	2,749.85	73.99	15.31	0.59	-598.64	6,253.60	5,210.78	5,173.95	36.83	141.491		
8,896.87	6,848.39	2,750.00	2,749.85	76.71	15.31	0.59	-598.64	6,253.60	5,148.84	5,111.89	36.95	139.360		
8,900.00	6,848.39	2,750.00	2,749.85	76.80	15.31	0.59	-598.64	6,253.60	5,146.86	5,109.91	36.95	139.291		
8,996.42	6,848.41	2,750.00	2,749.85	79.53	15.31	0.59	-598.64	6,253.60	5,086.33	5,049.25	37.08	137.169		
9,000.00	6,848.42	2,750.00	2,749.85	79.63	15.31	0.59	-598.64	6,253.60	5,084.10	5,047.01	37.09	137.091		
9,095.96	6,848.44	2,750.00	2,749.85	82.36	15.31	0.59	-598.64	6,253.60	5,025.01	4,987.78	37.23	134.981		
9,100.00	6,848.44	2,750.00	2,749.85	82.47	15.31	0.59	-598.64	6,253.60	5,022.55	4,985.32	37.23	134.893		
9,195.50	6,848.46	2,750.00	2,749.85	85.20	15.31	0.59	-598.64	6,253.60	4,964.94	4,927.55	37.39	132.799		
9,200.00	6,848.46	2,750.00	2,749.85	85.33	15.31	0.59	-598.64	6,253.60	4,962.25	4,924.86	37.39	132.700		
9,295.03	6,848.49	2,750.00	2,749.85	88.06	15.31	0.59	-598.64	6,253.60	4,906.16	4,868.60	37.56	130.625		
9,300.00	6,848.49	2,750.00	2,749.85	88.20	15.31	0.59	-598.64	6,253.60	4,903.25	4,865.69	37.57	130.516		
9,394.55	6,848.51	2,750.00	2,749.85	90.92	15.31	0.59	-598.64	6,253.60	4,848.71	4,810.96	37.74	128.463		
9,400.00	6,848.51	2,750.00	2,749.85	91.08	15.31	0.59	-598.64	6,253.60	4,845.60	4,807.85	37.75	128.345		
9,494.07	6,848.53	2,750.00	2,749.85	93.80	15.31	0.59	-598.64	6,253.60	4,792.64	4,754.70	37.94	126.317		
9,500.00	6,848.54	2,750.00	2,749.85	93.97	15.31	0.59	-598.64	6,253.60	4,789.34	4,751.39	37.95	126.190		
9,593.58	6,848.56	2,750.00	2,749.85	96.68	15.31	0.59	-598.64	6,253.60	4,738.00	4,699.85	38.15	124.191		
9,600.00	6,848.56	2,750.00	2,749.85	96.87	15.31	0.59	-598.64	6,253.60	4,734.52	4,696.36	38.16	124.055		
9,693.08	6,848.58	2,750.00	2,749.85	99.57	15.31	0.59	-598.64	6,253.60	4,684.85	4,646.47	38.37	122.089		
9,700.00	6,848.58	2,750.00	2,749.85	99.77	15.31	0.59	-598.64	6,253.60	4,681.20	4,642.82	38.39	121.944		
9,792.57	6,848.61	2,750.00	2,749.85	102.47	15.31	0.59	-598.64	6,253.60	4,633.22	4,594.61	38.61	120.014		
9,800.00	6,848.61	2,750.00	2,749.85	102.69	15.31	0.59	-598.64	6,253.60	4,629.43	4,590.81	38.62	119.861		
9,892.06	6,848.63	2,750.00	2,749.85	105.37	15.31	0.59	-598.64	6,253.60	4,583.18	4,544.33	38.85	117.971		
9,900.00	6,848.63	2,750.00	2,749.85	105.61	15.31	0.59	-598.64	6,253.60	4,579.25	4,540.38	38.87	117.809		
9,991.54	6,848.66	2,750.00	2,749.85	108.28	15.31	0.59	-598.64	6,253.60	4,534.77	4,495.66	39.11	115.963		
10,000.00	6,848.66	2,750.00	2,749.85	108.53	15.31	0.59	-598.64	6,253.60	4,530.73	4,491.60	39.13	115.794		
10,091.01	6,848.68	2,750.00	2,749.85	111.20	15.31	0.59	-598.64	6,253.60	4,488.05	4,448.68	39.37	113.995		
10,100.00	6,848.68	2,750.00	2,749.85	111.46	15.31	0.59	-598.64	6,253.60	4,483.91	4,444.51	39.39	113.820		
10,190.47	6,848.70	2,750.00	2,749.85	114.12	15.31	0.59	-598.64	6,253.60	4,443.06	4,403.42	39.65	112.071		
10,200.00	6,848.71	2,750.00	2,749.85	114.40	15.31	0.59	-598.64	6,253.60	4,438.85	4,399.18	39.67	111.889		
10,289.93	6,848.73	2,750.00	2,749.85	117.05	15.31	0.59	-598.64	6,253.60	4,399.88	4,359.95	39.93	110.193		
10,300.00	6,848.73	2,750.00	2,749.85	117.34	15.31	0.59	-598.64	6,253.60	4,395.60	4,355.64	39.96	110.006		
10,389.37	6,848.75	2,750.00	2,749.85	119.98	15.31	0.59	-598.64	6,253.60	4,358.53	4,318.31	40.22	108.367		
10,400.00	6,848.75	2,750.00	2,749.85	120.29	15.31	0.59	-598.64	6,253.60	4,354.22	4,313.97	40.25	108.175		
10,488.81	6,848.78	2,750.00	2,749.85	122.91	15.31	0.59	-598.64	6,253.60	4,319.08	4,278.57	40.52	106.595		
10,500.00	6,848.78	2,750.00	2,749.85	123.24	15.31	0.59	-598.64	6,253.60	4,314.77	4,274.21	40.55	106.399		
10,588.24	6,848.80	2,750.00	2,749.85	125.85	15.31	0.59	-598.64	6,253.60	4,281.59	4,240.76	40.82	104.880		
10,600.00	6,848.80	2,750.00	2,749.85	126.20	15.31	0.59	-598.64	6,253.60	4,277.28	4,236.42	40.86	104.681		
10,687.66	6,848.82	2,750.00	2,749.85	128.79	15.31	0.59	-598.64	6,253.60	4,246.09	4,204.96	41.13	103.226		
10,700.00	6,848.83	2,750.00	2,749.85	129.16	15.31	0.59	-598.64	6,253.60	4,241.83	4,200.65	41.17	103.025		
10,787.07	6,848.85	2,750.00	2,749.85	131.73	15.31	0.59	-598.64	6,253.60	4,212.65	4,171.20	41.45	101.635		
10,800.00	6,848.85	2,750.00	2,749.85	132.12	15.31	0.59	-598.64	6,253.60	4,208.45	4,166.96	41.49	101.433		
10,886.47	6,848.87	2,750.00	2,749.85	134.68	15.31	0.59	-598.64	6,253.60	4,181.30	4,139.53	41.77	100.109		
10,900.00	6,848.88	2,750.00	2,749.85	135.08	15.31	0.59	-598.64	6,253.60	4,177.20	4,135.39	41.81	99.907		
10,985.86	6,848.90	2,750.00	2,749.85	137.63	15.31	0.59	-598.64	6,253.60	4,152.10	4,110.01	42.09	98.651		
11,000.00	6,848.90	2,750.00	2,749.85	138.05	15.31	0.59	-598.64	6,253.60	4,148.12	4,105.99	42.13	98.450		
11,085.25	6,848.92	2,750.00	2,749.85	140.58	15.31	0.59	-598.64	6,253.60	4,125.09	4,082.68	42.41	97.262		

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit 133 Lateral - Original Hole - As Drilled													Offset Site Error:	0.00 ft
Survey Program:		100-Standard Keeper					Rule Assigned:				Offset Well Error:	15.00 ft		
Reference	Offset	Semi Major Axis		Offset Wellbore Centre		Distance			Warning					
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
11,100.00	6,848.92	2,750.00	2,749.85	141.02	15.31	0.59	-598.64	6,253.60	4,121.27	4,078.81	42.46	97.061		
11,184.63	6,848.94	2,750.00	2,749.85	143.54	15.31	0.59	-598.64	6,253.60	4,100.31	4,057.57	42.74	95.941		
11,200.00	6,848.95	2,750.00	2,749.85	144.00	15.31	0.59	-598.64	6,253.60	4,096.68	4,053.89	42.79	95.743		
11,284.00	6,848.97	2,750.00	2,749.85	146.50	15.31	0.59	-598.64	6,253.60	4,077.81	4,034.74	43.07	94.689		
11,300.00	6,848.97	2,750.00	2,749.85	146.97	15.31	0.59	-598.64	6,253.60	4,074.40	4,031.28	43.12	94.494		
11,383.37	6,848.99	2,750.00	2,749.85	149.45	15.31	0.59	-598.64	6,253.60	4,057.62	4,014.22	43.39	93.505		
11,400.00	6,849.00	2,750.00	2,749.85	149.95	15.31	0.59	-598.64	6,253.60	4,054.46	4,011.01	43.45	93.313		
11,482.74	6,849.02	2,750.00	2,749.85	152.41	15.31	0.59	-598.64	6,253.60	4,039.77	3,996.04	43.73	92.385		
11,500.00	6,849.02	2,750.00	2,749.85	152.93	15.31	0.59	-598.64	6,253.60	4,036.91	3,993.12	43.79	92.197		
11,582.10	6,849.04	2,750.00	2,749.85	155.38	15.31	0.59	-598.64	6,253.60	4,024.29	3,980.23	44.07	91.324		
11,600.00	6,849.04	2,750.00	2,749.85	155.91	15.31	0.59	-598.64	6,253.60	4,021.76	3,977.63	44.13	91.139		
11,681.46	6,849.06	2,750.00	2,749.85	158.34	15.31	0.59	-598.64	6,253.60	4,011.22	3,966.81	44.41	90.314		
11,700.00	6,849.07	2,750.00	2,749.85	158.90	15.31	0.59	-598.64	6,253.60	4,009.05	3,964.57	44.48	90.130		
11,780.81	6,849.09	2,750.00	2,749.85	161.31	15.31	0.59	-598.64	6,253.60	4,000.58	3,955.80	44.78	89.342		
11,800.00	6,849.09	2,750.00	2,749.85	161.88	15.31	0.59	-598.64	6,253.60	3,998.81	3,953.96	44.85	89.158		
11,880.16	6,849.11	2,750.00	2,749.85	164.28	15.31	0.59	-598.64	6,253.60	3,992.38	3,947.21	45.17	88.391		
11,900.00	6,849.12	2,750.00	2,749.85	164.87	15.31	0.59	-598.64	6,253.60	3,991.04	3,945.79	45.25	88.201		
11,979.50	6,849.14	2,750.00	2,749.85	167.25	15.31	0.59	-598.64	6,253.60	3,986.64	3,941.05	45.60	87.436		
12,000.00	6,849.14	2,750.00	2,749.85	167.86	15.31	0.59	-598.64	6,253.60	3,985.77	3,940.08	45.69	87.236		
12,078.77	6,849.16	2,750.00	2,749.85	170.21	15.31	0.59	-598.64	6,253.60	3,983.38	3,937.30	46.08	86.453		
12,100.00	6,849.17	2,750.00	2,749.85	170.85	15.31	0.59	-598.64	6,253.60	3,983.00	3,936.81	46.19	86.238		
12,200.00	6,849.19	2,750.00	2,749.85	173.84	15.31	0.59	-598.64	6,253.60	3,982.74	3,935.99	46.75	85.191 CC, ES		
12,300.00	6,849.21	2,750.00	2,749.85	176.84	15.31	0.59	-598.64	6,253.60	3,984.99	3,937.61	47.38	84.103		
12,400.00	6,849.24	2,750.00	2,749.85	179.83	15.31	0.59	-598.64	6,253.60	3,989.75	3,941.68	48.07	83.000		
12,500.00	6,849.26	2,750.00	2,749.85	182.83	15.31	0.59	-598.64	6,253.60	3,997.00	3,948.21	48.80	81.914		
12,600.00	6,849.29	2,750.00	2,749.85	185.82	15.31	0.59	-598.64	6,253.60	4,006.74	3,957.20	49.54	80.876		
12,700.00	6,849.31	2,750.00	2,749.85	188.82	15.31	0.59	-598.64	6,253.60	4,018.95	3,968.65	50.30	79.906		
12,800.00	6,849.34	2,750.00	2,749.85	191.82	15.31	0.59	-598.64	6,253.60	4,033.59	3,982.55	51.05	79.017		
12,900.00	6,849.36	2,750.00	2,749.85	194.82	15.31	0.59	-598.64	6,253.60	4,050.66	3,998.87	51.79	78.215		
13,000.00	6,849.38	2,750.00	2,749.85	197.82	15.31	0.59	-598.64	6,253.60	4,070.11	4,017.59	52.51	77.505		
13,100.00	6,849.41	2,750.00	2,749.85	200.83	15.31	0.59	-598.64	6,253.60	4,091.91	4,038.69	53.22	76.886		
13,200.00	6,849.43	2,750.00	2,749.85	203.83	15.31	0.59	-598.64	6,253.60	4,116.02	4,062.12	53.90	76.357		
13,300.00	6,849.46	2,750.00	2,749.85	206.83	15.31	0.59	-598.64	6,253.60	4,142.41	4,087.85	54.57	75.916		
13,400.00	6,849.48	2,750.00	2,749.85	209.84	15.31	0.59	-598.64	6,253.60	4,171.03	4,115.83	55.20	75.561		
13,500.00	6,849.50	2,750.00	2,749.85	212.84	15.31	0.59	-598.64	6,253.60	4,201.84	4,146.03	55.81	75.287		
13,600.00	6,849.53	2,750.00	2,749.85	215.85	15.31	0.59	-598.64	6,253.60	4,234.79	4,178.39	56.39	75.093		
13,700.00	6,849.55	2,750.00	2,749.85	218.86	15.31	0.59	-598.64	6,253.60	4,269.82	4,212.87	56.95	74.975		
13,800.00	6,849.58	2,750.00	2,749.85	221.87	15.31	0.59	-598.64	6,253.60	4,306.89	4,249.41	57.48	74.929 SF		
13,900.00	6,849.60	2,750.00	2,749.85	224.87	15.31	0.59	-598.64	6,253.60	4,345.94	4,287.96	57.98	74.952		
14,000.00	6,849.63	2,750.00	2,749.85	227.88	15.31	0.59	-598.64	6,253.60	4,386.93	4,328.47	58.46	75.042		
14,100.00	6,849.65	2,750.00	2,749.85	230.89	15.31	0.59	-598.64	6,253.60	4,429.80	4,370.89	58.91	75.194		
14,200.00	6,849.67	2,750.00	2,749.85	233.90	15.31	0.59	-598.64	6,253.60	4,474.49	4,415.15	59.34	75.407		
14,300.00	6,849.70	2,750.00	2,749.85	236.92	15.31	0.59	-598.64	6,253.60	4,520.95	4,461.21	59.74	75.677		
14,400.00	6,849.72	2,750.00	2,749.85	239.93	15.31	0.59	-598.64	6,253.60	4,569.13	4,509.01	60.12	76.003		
14,500.00	6,849.75	2,750.00	2,749.85	242.94	15.31	0.59	-598.64	6,253.60	4,618.97	4,558.50	60.47	76.380		
14,600.00	6,849.77	2,750.00	2,749.85	245.95	15.31	0.59	-598.64	6,253.60	4,670.42	4,609.61	60.81	76.807		
14,700.00	6,849.80	2,750.00	2,749.85	248.96	15.31	0.59	-598.64	6,253.60	4,723.43	4,662.31	61.12	77.281		
14,800.00	6,849.82	2,750.00	2,749.85	251.98	15.31	0.59	-598.64	6,253.60	4,777.94	4,716.53	61.41	77.800		
14,900.00	6,849.84	2,750.00	2,749.85	254.99	15.31	0.59	-598.64	6,253.60	4,833.91	4,772.22	61.69	78.362		
15,000.00	6,849.87	2,750.00	2,749.85	258.01	15.31	0.59	-598.64	6,253.60	4,891.28	4,829.34	61.94	78.965		
15,100.00	6,849.89	2,750.00	2,749.85	261.02	15.31	0.59	-598.64	6,253.60	4,950.00	4,887.82	62.18	79.607		
15,200.00	6,849.92	2,750.00	2,749.85	264.04	15.31	0.59	-598.64	6,253.60	5,010.04	4,947.64	62.40	80.286		

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit 133 Lateral - Original Hole - As Drilled											Offset Site Error:	0.00 ft
Survey Program: 100-Standard Keeper											Offset Well Error:	15.00 ft
Reference	Offset	Semi Major Axis		Distance		Rule Assigned:		Warning				
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor
15,300.00	6,849.94	2,750.00	2,749.85	267.05	15.31	0.59	-598.64	6,253.60	5,071.33	5,008.72	62.61	81.001
15,400.00	6,849.97	2,750.00	2,749.85	270.07	15.31	0.59	-598.64	6,253.60	5,133.85	5,071.04	62.80	81.749
15,500.00	6,849.99	2,750.00	2,749.85	273.08	15.31	0.59	-598.64	6,253.60	5,197.53	5,134.55	62.98	82.529
15,600.00	6,850.01	2,750.00	2,749.85	276.10	15.31	0.59	-598.64	6,253.60	5,262.34	5,199.20	63.14	83.339
15,700.00	6,850.04	2,750.00	2,749.85	279.12	15.31	0.59	-598.64	6,253.60	5,328.24	5,264.95	63.30	84.179
15,800.00	6,850.06	2,750.00	2,749.85	282.14	15.31	0.59	-598.64	6,253.60	5,395.20	5,331.76	63.44	85.047
15,900.00	6,850.09	2,750.00	2,749.85	285.15	15.31	0.59	-598.64	6,253.60	5,463.16	5,399.59	63.57	85.940
16,000.00	6,850.11	2,750.00	2,749.85	288.17	15.31	0.59	-598.64	6,253.60	5,532.09	5,468.40	63.69	86.859
16,100.00	6,850.13	2,750.00	2,749.85	291.19	15.31	0.59	-598.64	6,253.60	5,601.96	5,538.16	63.80	87.802
16,200.00	6,850.16	2,750.00	2,749.85	294.21	15.31	0.59	-598.64	6,253.60	5,672.73	5,608.83	63.91	88.768
16,300.00	6,850.18	2,750.00	2,749.85	297.23	15.31	0.59	-598.64	6,253.60	5,744.38	5,680.37	64.00	89.756
16,400.00	6,850.21	2,750.00	2,749.85	300.25	15.31	0.59	-598.64	6,253.60	5,816.85	5,752.77	64.09	90.764
16,500.00	6,850.23	2,750.00	2,749.85	303.27	15.31	0.59	-598.64	6,253.60	5,890.14	5,825.97	64.17	91.791
16,600.00	6,850.26	2,750.00	2,749.85	306.28	15.31	0.59	-598.64	6,253.60	5,964.20	5,899.96	64.24	92.838
16,700.00	6,850.28	2,750.00	2,749.85	309.30	15.31	0.59	-598.64	6,253.60	6,039.01	5,974.70	64.31	93.902
16,800.00	6,850.30	2,750.00	2,749.85	312.32	15.31	0.59	-598.64	6,253.60	6,114.54	6,050.16	64.37	94.984
16,900.00	6,850.33	2,750.00	2,749.85	315.35	15.31	0.59	-598.64	6,253.60	6,190.76	6,126.33	64.43	96.081
17,000.00	6,850.35	2,750.00	2,749.85	318.37	15.31	0.59	-598.64	6,253.60	6,267.65	6,203.16	64.49	97.194
17,100.00	6,850.38	2,750.00	2,749.85	321.39	15.31	0.59	-598.64	6,253.60	6,345.19	6,280.65	64.54	98.321
17,200.00	6,850.40	2,750.00	2,749.85	324.41	15.31	0.59	-598.64	6,253.60	6,423.34	6,358.76	64.58	99.463
17,300.00	6,850.43	2,750.00	2,749.85	327.43	15.31	0.59	-598.64	6,253.60	6,502.10	6,437.47	64.62	100.617
17,400.00	6,850.45	2,750.00	2,749.85	330.45	15.31	0.59	-598.64	6,253.60	6,581.43	6,516.77	64.66	101.784
17,500.00	6,850.47	2,750.00	2,749.85	333.47	15.31	0.59	-598.64	6,253.60	6,661.32	6,596.62	64.70	102.963
17,600.00	6,850.50	2,750.00	2,749.85	336.49	15.31	0.59	-598.64	6,253.60	6,741.74	6,677.01	64.73	104.153
17,700.00	6,850.52	2,750.00	2,749.85	339.52	15.31	0.59	-598.64	6,253.60	6,822.69	6,757.93	64.76	105.354
17,800.00	6,850.55	2,750.00	2,749.85	342.54	15.31	0.59	-598.64	6,253.60	6,904.13	6,839.34	64.79	106.565
17,900.00	6,850.57	2,750.00	2,749.85	345.56	15.31	0.59	-598.64	6,253.60	6,986.05	6,921.24	64.81	107.785
18,000.00	6,850.59	2,750.00	2,749.85	348.58	15.31	0.59	-598.64	6,253.60	7,068.44	7,003.60	64.84	109.015
18,100.00	6,850.62	2,750.00	2,749.85	351.61	15.31	0.59	-598.64	6,253.60	7,151.28	7,086.42	64.86	110.253
18,200.00	6,850.64	2,750.00	2,749.85	354.63	15.31	0.59	-598.64	6,253.60	7,234.55	7,169.67	64.88	111.500
18,300.00	6,850.67	2,750.00	2,749.85	357.65	15.31	0.59	-598.64	6,253.60	7,318.24	7,253.34	64.90	112.754
18,400.00	6,850.69	2,750.00	2,749.85	360.67	15.31	0.59	-598.64	6,253.60	7,402.34	7,337.42	64.92	114.015
18,500.00	6,850.72	2,750.00	2,749.85	363.70	15.31	0.59	-598.64	6,253.60	7,486.83	7,421.88	64.94	115.284
18,600.00	6,850.74	2,750.00	2,749.85	366.72	15.31	0.59	-598.64	6,253.60	7,571.69	7,506.73	64.96	116.558
18,700.00	6,850.76	2,750.00	2,749.85	369.75	15.31	0.59	-598.64	6,253.60	7,656.92	7,591.94	64.98	117.839
18,800.00	6,850.79	2,750.00	2,749.85	372.77	15.31	0.59	-598.64	6,253.60	7,742.51	7,677.51	64.99	119.125
18,900.00	6,850.81	2,750.00	2,749.85	375.79	15.31	0.59	-598.64	6,253.60	7,828.43	7,763.42	65.01	120.417
19,000.00	6,850.84	2,750.00	2,749.85	378.82	15.31	0.59	-598.64	6,253.60	7,914.69	7,849.66	65.03	121.713
19,100.00	6,850.86	2,750.00	2,749.85	381.84	15.31	0.59	-598.64	6,253.60	8,001.26	7,936.22	65.04	123.015
19,200.00	6,850.89	2,750.00	2,749.85	384.87	15.31	0.59	-598.64	6,253.60	8,088.15	8,023.09	65.06	124.320
19,300.00	6,850.91	2,750.00	2,749.85	387.89	15.31	0.59	-598.64	6,253.60	8,175.34	8,110.26	65.07	125.630
19,400.00	6,850.93	2,750.00	2,749.85	390.91	15.31	0.59	-598.64	6,253.60	8,262.81	8,197.72	65.09	126.943
19,500.00	6,850.96	2,750.00	2,749.85	393.94	15.31	0.59	-598.64	6,253.60	8,350.57	8,285.46	65.11	128.260
19,600.00	6,850.98	2,750.00	2,749.85	396.96	15.31	0.59	-598.64	6,253.60	8,438.60	8,373.48	65.12	129.580
19,673.90	6,851.00	2,750.00	2,749.85	399.20	15.31	0.59	-598.64	6,253.60	8,503.82	8,438.69	65.13	130.557
19,700.00	6,851.01	2,750.00	2,749.85	399.99	15.31	0.59	-598.64	6,253.60	8,526.89	8,461.75	65.14	130.903
19,773.90	6,851.02	2,750.00	2,749.85	402.22	15.31	0.59	-598.64	6,253.60	8,592.31	8,527.15	65.15	131.882

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit 134S - OH - OH													Offset Site Error:	0.00 ft
Survey Program: 0-INCLINOMETER													Offset Well Error:	0.00 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
0.00	0.00	0.00	0.00	0.00	0.00	100.38	-1,629.23	8,890.79	9,040.64					
100.00	100.00	0.00	0.00	0.30	0.00	100.38	-1,629.23	8,890.79	9,039.19	9,038.90	0.30	N/A		
200.00	200.00	19.01	19.01	0.66	0.26	100.38	-1,629.23	8,890.79	9,038.83	9,037.92	0.91	9,891.678		
300.00	300.00	119.01	119.01	1.01	1.62	100.38	-1,629.23	8,890.79	9,038.83	9,036.20	2.63	3,439.307		
400.00	400.00	219.01	219.01	1.37	4.30	100.38	-1,629.23	8,890.79	9,038.83	9,033.16	5.67	1,593.988		
500.00	500.00	319.01	319.01	1.73	7.34	100.38	-1,629.23	8,890.79	9,038.83	9,029.77	9.07	997.019		
600.00	599.98	411.89	411.88	2.08	10.16	-24.35	-1,628.65	8,890.79	9,037.14	9,024.91	12.23	738.823		
700.00	699.84	518.87	518.85	2.42	13.40	-24.40	-1,629.23	8,890.79	9,032.47	9,016.65	15.82	570.915		
800.00	799.45	618.48	618.46	2.77	16.43	-24.49	-1,629.23	8,890.79	9,024.53	9,005.34	19.19	470.176		
900.00	898.70	717.73	717.71	3.13	19.44	-24.62	-1,629.23	8,890.79	9,013.44	8,990.87	22.56	399.494		
963.97	961.95	780.15	780.13	3.37	21.34	-24.72	-1,628.69	8,890.79	9,004.59	8,979.90	24.69	364.724		
1,000.00	997.50	814.76	814.73	3.51	22.39	-24.74	-1,628.72	8,890.79	8,999.31	8,973.44	25.87	347.867		
1,100.00	1,096.19	910.84	910.81	3.90	25.31	-24.78	-1,628.91	8,890.79	8,984.66	8,955.52	29.15	308.256		
1,200.00	1,194.89	1,013.92	1,013.90	4.30	28.44	-24.82	-1,629.23	8,890.79	8,970.05	8,937.41	32.64	274.810		
1,300.00	1,293.58	1,112.61	1,112.59	4.70	31.44	-24.86	-1,629.23	8,890.79	8,955.38	8,919.38	36.01	248.725		
1,400.00	1,392.27	1,211.31	1,211.28	5.11	34.43	-24.91	-1,629.23	8,890.79	8,940.72	8,901.35	39.37	227.082		
1,500.00	1,490.96	1,308.44	1,308.41	5.52	37.38	-24.95	-1,628.71	8,890.79	8,925.97	8,883.28	42.69	209.068		
1,600.00	1,589.65	1,404.59	1,404.56	5.94	40.30	-24.99	-1,628.89	8,890.79	8,911.35	8,865.37	45.99	193.775		
1,700.00	1,688.34	1,507.39	1,507.35	6.36	43.42	-25.04	-1,629.23	8,890.79	8,896.76	8,847.28	49.48	179.787		
1,800.00	1,787.03	1,606.08	1,606.05	6.78	46.42	-25.08	-1,629.23	8,890.79	8,882.12	8,829.26	52.86	168.036		
1,900.00	1,885.73	1,704.77	1,704.74	7.20	49.42	-25.12	-1,629.23	8,890.79	8,867.49	8,811.25	56.23	157.691		
2,000.00	1,984.42	1,800.84	1,800.79	7.62	52.33	-25.17	-1,628.18	8,890.79	8,852.68	8,793.15	59.53	148.712		
2,100.00	2,083.11	1,894.73	1,894.68	8.04	55.19	-25.21	-1,628.50	8,890.79	8,838.11	8,775.35	62.76	140.824		
2,200.00	2,181.80	2,000.87	2,000.81	8.46	58.41	-25.26	-1,629.23	8,890.79	8,823.61	8,757.25	66.36	132.960		
2,300.00	2,280.49	2,099.56	2,099.50	8.89	61.41	-25.30	-1,629.23	8,890.79	8,808.99	8,739.25	69.74	126.312		
2,400.00	2,379.18	2,198.25	2,198.19	9.31	64.40	-25.35	-1,629.23	8,890.79	8,794.38	8,721.26	73.12	120.276		
2,500.00	2,477.87	2,293.67	2,293.59	9.74	67.30	-25.40	-1,627.64	8,890.79	8,779.52	8,703.12	76.40	114.919		
2,600.00	2,576.56	2,385.56	2,385.46	10.16	70.09	-25.44	-1,628.07	8,890.79	8,765.00	8,685.43	79.57	110.154		
2,700.00	2,675.26	2,477.54	2,477.43	10.59	72.88	-25.48	-1,628.95	8,890.79	8,750.55	8,667.81	82.75	105.751		
2,800.00	2,773.95	2,593.07	2,592.96	11.02	76.39	-25.53	-1,629.23	8,890.79	8,736.00	8,649.36	86.64	100.835		
2,900.00	2,872.64	2,691.76	2,691.65	11.44	79.39	-25.57	-1,629.23	8,890.79	8,721.41	8,631.40	90.02	96.887		
3,000.00	2,971.33	2,790.46	2,790.34	11.87	82.39	-25.62	-1,629.23	8,890.79	8,706.83	8,613.44	93.40	93.224		
3,100.00	3,070.02	2,889.15	2,889.03	12.30	85.38	-25.66	-1,629.23	8,890.79	8,692.26	8,595.48	96.78	89.817		
3,200.00	3,168.71	2,987.84	2,987.73	12.73	88.38	-25.71	-1,629.23	8,890.79	8,677.69	8,577.54	100.16	86.640		
3,300.00	3,267.40	3,055.01	3,054.89	13.16	90.42	-25.74	-1,629.23	8,890.79	8,663.19	8,560.60	102.59	84.448		
3,400.00	3,366.10	3,055.01	3,054.89	13.58	90.42	-25.74	-1,629.23	8,890.79	8,649.56	8,546.58	102.97	83.998		
3,500.00	3,464.79	3,055.01	3,054.89	14.01	90.42	-25.74	-1,629.23	8,890.79	8,637.06	8,533.71	103.35	83.572		
3,600.00	3,563.48	3,055.01	3,054.89	14.44	90.42	-25.74	-1,629.23	8,890.79	8,625.71	8,521.99	103.71	83.170		
3,700.00	3,662.17	3,055.01	3,054.89	14.87	90.42	-25.74	-1,629.23	8,890.79	8,615.50	8,511.43	104.06	82.791		
3,800.00	3,760.86	3,055.01	3,054.89	15.30	90.42	-25.74	-1,629.23	8,890.79	8,606.44	8,502.03	104.40	82.436		
3,900.00	3,859.55	3,055.01	3,054.89	15.73	90.42	-25.74	-1,629.23	8,890.79	8,598.53	8,493.80	104.73	82.105		
4,000.00	3,958.24	3,055.01	3,054.89	16.16	90.42	-25.74	-1,629.23	8,890.79	8,591.78	8,486.74	105.04	81.797		
4,100.00	4,056.94	3,055.01	3,054.89	16.59	90.42	-25.74	-1,629.23	8,890.79	8,586.19	8,480.85	105.34	81.512		
4,200.00	4,155.63	3,055.01	3,054.89	17.02	90.42	-25.74	-1,629.23	8,890.79	8,581.76	8,476.14	105.62	81.250		
4,300.00	4,254.32	3,055.01	3,054.89	17.45	90.42	-25.74	-1,629.23	8,890.79	8,578.50	8,472.60	105.89	81.011		
4,400.00	4,353.01	3,055.01	3,054.89	17.88	90.42	-25.74	-1,629.23	8,890.79	8,576.40	8,470.25	106.15	80.795		
4,500.00	4,451.70	3,055.01	3,054.89	18.30	90.42	-25.74	-1,629.23	8,890.79	8,575.46	8,469.07	106.39	80.601		
4,530.13	4,481.44	3,055.01	3,054.89	18.43	90.42	-25.74	-1,629.23	8,890.79	8,575.41	8,468.94	106.46	80.547		
4,600.00	4,550.39	3,055.01	3,054.89	18.73	90.42	-25.74	-1,629.23	8,890.79	8,575.69	8,469.07	106.62	80.429		
4,700.00	4,649.08	3,055.01	3,054.89	19.16	90.42	-25.74	-1,629.23	8,890.79	8,577.09	8,470.25	106.84	80.280		
4,800.00	4,747.77	3,055.01	3,054.89	19.59	90.42	-25.74	-1,629.23	8,890.79	8,579.65	8,472.61	107.04	80.153		
4,900.00	4,846.47	3,055.01	3,054.89	20.02	90.42	-25.74	-1,629.23	8,890.79	8,583.38	8,476.15	107.23	80.048		

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit 134S - OH - OH													Offset Site Error:	0.00 ft	
Survey Program:		0-INCLINOMETER					Rule Assigned:							Offset Well Error:	0.00 ft
Reference	Offset	Reference	Offset	Semi Major Axis	Offset	Highside Toolface	Offset Wellbore Centre		Distance			Separation	Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Factor			
5,000.00	4,945.16	3,055.01	3,054.89	20.45	90.42	-25.74	-1,629.23	8,890.79	8,588.27	8,480.87	107.40	79.964			
5,100.00	5,043.85	3,055.01	3,054.89	20.88	90.42	-25.74	-1,629.23	8,890.79	8,594.32	8,486.76	107.56	79.902			
5,200.00	5,142.54	3,055.01	3,054.89	21.31	90.42	-25.74	-1,629.23	8,890.79	8,601.53	8,493.83	107.71	79.861			
5,300.00	5,241.23	3,055.01	3,054.89	21.74	90.42	-25.74	-1,629.23	8,890.79	8,609.90	8,502.06	107.84	79.842			
5,400.00	5,339.92	3,055.01	3,054.89	22.17	90.42	-25.74	-1,629.23	8,890.79	8,619.42	8,511.46	107.95	79.844			
5,500.00	5,438.61	3,055.01	3,054.89	22.61	90.42	-25.74	-1,629.23	8,890.79	8,630.08	8,522.02	108.06	79.866			
5,600.00	5,537.31	3,055.01	3,054.89	23.04	90.42	-25.74	-1,629.23	8,890.79	8,641.89	8,533.74	108.15	79.909			
5,700.00	5,636.00	3,055.01	3,054.89	23.47	90.42	-25.74	-1,629.23	8,890.79	8,654.84	8,546.62	108.22	79.973			
5,800.00	5,734.69	3,055.01	3,054.89	23.90	90.42	-25.74	-1,629.23	8,890.79	8,668.92	8,560.64	108.28	80.057			
5,900.00	5,833.38	3,055.01	3,054.89	24.33	90.42	-25.74	-1,629.23	8,890.79	8,684.13	8,575.80	108.33	80.162			
6,000.00	5,932.07	3,055.01	3,054.89	24.76	90.42	-25.74	-1,629.23	8,890.79	8,700.47	8,592.10	108.37	80.286			
6,100.00	6,030.76	3,055.01	3,054.89	25.19	90.42	-25.74	-1,629.23	8,890.79	8,717.92	8,609.53	108.39	80.431			
6,200.00	6,129.45	3,055.01	3,054.89	25.62	90.42	-25.74	-1,629.23	8,890.79	8,736.48	8,628.08	108.40	80.595			
6,300.00	6,228.15	3,055.01	3,054.89	26.05	90.42	-25.74	-1,629.23	8,890.79	8,756.15	8,647.75	108.40	80.778			
6,370.81	6,298.03	3,055.01	3,054.89	26.35	90.42	-25.74	-1,629.23	8,890.79	8,770.73	8,662.34	108.39	80.920			
6,400.00	6,326.74	3,055.01	3,054.89	26.48	90.42	-18.35	-1,629.23	8,890.79	8,776.26	8,667.88	108.38	80.976			
6,450.00	6,375.33	3,055.01	3,054.89	26.73	90.42	-10.88	-1,629.23	8,890.79	8,782.91	8,674.54	108.37	81.046			
6,500.00	6,422.93	3,055.01	3,054.89	26.99	90.42	-6.59	-1,629.23	8,890.79	8,785.99	8,677.64	108.36	81.084			
6,550.00	6,469.25	3,055.01	3,054.89	27.29	90.42	-3.82	-1,629.23	8,890.79	8,785.49	8,677.14	108.34	81.090			
6,600.00	6,513.99	3,055.01	3,054.89	27.61	90.42	-1.87	-1,629.23	8,890.79	8,781.39	8,673.07	108.33	81.065			
6,650.00	6,556.88	3,055.01	3,054.89	27.96	90.42	-0.39	-1,629.23	8,890.79	8,773.73	8,665.43	108.30	81.010			
6,700.00	6,597.66	3,055.01	3,054.89	28.34	90.42	0.81	-1,629.23	8,890.79	8,762.54	8,654.26	108.28	80.925			
6,750.00	6,636.07	3,055.01	3,054.89	28.76	90.42	1.83	-1,629.23	8,890.79	8,747.88	8,639.63	108.25	80.811			
6,800.00	6,671.88	3,055.01	3,054.89	29.21	90.42	2.75	-1,629.23	8,890.79	8,729.82	8,621.60	108.22	80.670			
6,850.00	6,704.87	3,055.01	3,054.89	29.71	90.42	3.62	-1,629.23	8,890.79	8,708.45	8,600.27	108.18	80.501			
6,900.00	6,734.84	3,055.01	3,054.89	30.25	90.42	4.48	-1,629.23	8,890.79	8,683.88	8,575.75	108.13	80.307			
6,950.00	6,761.59	3,055.01	3,054.89	30.85	90.42	5.38	-1,629.23	8,890.79	8,656.23	8,548.15	108.08	80.088			
7,000.00	6,784.97	3,055.01	3,054.89	31.50	90.42	6.35	-1,629.23	8,890.79	8,625.65	8,517.62	108.03	79.845			
7,050.00	6,804.83	3,055.01	3,054.89	32.20	90.42	7.43	-1,629.23	8,890.79	8,592.29	8,484.32	107.97	79.580			
7,100.00	6,821.05	3,055.01	3,054.89	32.96	90.42	8.69	-1,629.23	8,890.79	8,556.33	8,448.42	107.91	79.292			
7,150.00	6,833.53	3,055.01	3,054.89	33.77	90.42	10.19	-1,629.23	8,890.79	8,517.96	8,410.12	107.84	78.984			
7,200.00	6,842.18	3,055.01	3,054.89	34.62	90.42	12.05	-1,629.23	8,890.79	8,477.38	8,369.61	107.78	78.656			
7,250.00	6,846.97	3,055.01	3,054.89	35.52	90.42	14.42	-1,629.23	8,890.79	8,434.82	8,327.11	107.71	78.309			
7,286.15	6,848.00	3,055.01	3,054.89	36.18	90.42	16.59	-1,629.23	8,890.79	8,402.94	8,295.28	107.67	78.046			
7,300.00	6,848.00	3,055.01	3,054.89	36.44	90.42	16.59	-1,629.23	8,890.79	8,390.57	8,282.92	107.65	77.944			
7,400.00	6,848.03	3,055.01	3,054.89	38.40	90.42	16.59	-1,629.23	8,890.79	8,301.36	8,193.85	107.51	77.213			
7,500.00	6,848.05	3,055.01	3,054.89	40.49	90.42	16.59	-1,629.23	8,890.79	8,212.40	8,105.01	107.38	76.478			
7,600.00	6,848.08	3,055.01	3,054.89	42.70	90.42	16.59	-1,629.23	8,890.79	8,123.69	8,016.43	107.26	75.738			
7,700.00	6,848.10	3,055.01	3,054.89	45.01	90.42	16.59	-1,629.23	8,890.79	8,035.25	7,928.11	107.15	74.993			
7,800.00	6,848.12	3,055.01	3,054.89	47.40	90.42	16.59	-1,629.23	8,890.79	7,947.09	7,840.05	107.04	74.244			
7,900.00	6,848.15	3,055.01	3,054.89	49.86	90.42	16.59	-1,629.23	8,890.79	7,859.21	7,752.26	106.94	73.489			
8,000.00	6,848.17	3,055.01	3,054.89	52.39	90.42	16.59	-1,629.23	8,890.79	7,771.62	7,664.76	106.86	72.730			
8,100.00	6,848.20	3,055.01	3,054.89	54.96	90.42	16.59	-1,629.23	8,890.79	7,684.33	7,577.56	106.78	71.966			
8,200.00	6,848.22	3,055.01	3,054.89	57.58	90.42	16.59	-1,629.23	8,890.79	7,597.36	7,490.65	106.71	71.196			
8,300.00	6,848.25	3,055.01	3,054.89	60.24	90.42	16.59	-1,629.23	8,890.79	7,510.71	7,404.06	106.65	70.422			
8,400.00	6,848.27	3,055.01	3,054.89	62.94	90.42	16.59	-1,629.23	8,890.79	7,424.40	7,317.80	106.61	69.644			
8,500.00	6,848.29	3,055.01	3,054.89	65.66	90.42	16.59	-1,629.23	8,890.79	7,338.44	7,231.87	106.57	68.861			
8,600.00	6,848.32	3,055.01	3,054.89	68.42	90.42	16.59	-1,629.23	8,890.79	7,252.83	7,146.29	106.55	68.073			
8,700.00	6,848.34	3,055.01	3,054.89	71.19	90.42	16.59	-1,629.23	8,890.79	7,167.60	7,061.07	106.53	67.281			
8,800.00	6,848.37	3,055.01	3,054.89	73.99	90.42	16.59	-1,629.23	8,890.79	7,082.75	6,976.22	106.53	66.485			
8,900.00	6,848.39	3,055.01	3,054.89	76.80	90.42	16.59	-1,629.23	8,890.79	6,998.31	6,891.76	106.54	65.685			
9,000.00	6,848.42	3,055.01	3,054.89	79.63	90.42	16.59	-1,629.23	8,890.79	6,914.28	6,807.71	106.57	64.881			

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit 134S - OH - OH											Offset Site Error:	0.00 ft
Survey Program: 0-INCLINOMETER											Offset Well Error:	0.00 ft
Reference	Offset	Semi Major Axis		Distance		Rule Assigned:		Warning				
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor
9,100.00	6,848.44	3,055.01	3,054.89	82.47	90.42	16.59	-1,629.23	8,890.79	6,830.68	6,724.07	106.61	64.074
9,200.00	6,848.46	3,055.01	3,054.89	85.33	90.42	16.59	-1,629.23	8,890.79	6,747.52	6,640.87	106.66	63.264
9,300.00	6,848.49	3,055.01	3,054.89	88.20	90.42	16.59	-1,629.23	8,890.79	6,664.83	6,558.11	106.72	62.452
9,400.00	6,848.51	3,055.01	3,054.89	91.08	90.42	16.59	-1,629.23	8,890.79	6,582.62	6,475.83	106.80	61.637
9,500.00	6,848.54	3,055.01	3,054.89	93.97	90.42	16.59	-1,629.23	8,890.79	6,500.91	6,394.02	106.89	60.821
9,600.00	6,848.56	3,055.01	3,054.89	96.87	90.42	16.59	-1,629.23	8,890.79	6,419.71	6,312.73	106.99	60.003
9,700.00	6,848.58	3,055.01	3,054.89	99.77	90.42	16.59	-1,629.23	8,890.79	6,339.06	6,231.95	107.11	59.185
9,800.00	6,848.61	3,055.01	3,054.89	102.69	90.42	16.59	-1,629.23	8,890.79	6,258.96	6,151.72	107.23	58.367
9,900.00	6,848.63	3,055.01	3,054.89	105.61	90.42	16.59	-1,629.23	8,890.79	6,179.44	6,072.06	107.38	57.549
10,000.00	6,848.66	3,055.01	3,054.89	108.53	90.42	16.59	-1,629.23	8,890.79	6,100.53	5,992.99	107.53	56.732
10,100.00	6,848.68	3,055.01	3,054.89	111.46	90.42	16.59	-1,629.23	8,890.79	6,022.24	5,914.54	107.70	55.917
10,200.00	6,848.71	3,055.01	3,054.89	114.40	90.42	16.59	-1,629.23	8,890.79	5,944.60	5,836.72	107.88	55.104
10,300.00	6,848.73	3,055.01	3,054.89	117.34	90.42	16.59	-1,629.23	8,890.79	5,867.64	5,759.56	108.07	54.293
10,400.00	6,848.75	3,055.01	3,054.89	120.29	90.42	16.59	-1,629.23	8,890.79	5,791.38	5,683.10	108.28	53.487
10,500.00	6,848.78	3,055.01	3,054.89	123.24	90.42	16.59	-1,629.23	8,890.79	5,715.85	5,607.36	108.49	52.685
10,600.00	6,848.80	3,055.01	3,054.89	126.20	90.42	16.59	-1,629.23	8,890.79	5,641.09	5,532.37	108.72	51.888
10,700.00	6,848.83	3,055.01	3,054.89	129.16	90.42	16.59	-1,629.23	8,890.79	5,567.12	5,458.17	108.95	51.097
10,800.00	6,848.85	3,055.01	3,054.89	132.12	90.42	16.59	-1,629.23	8,890.79	5,493.97	5,384.78	109.20	50.312
10,900.00	6,848.88	3,055.01	3,054.89	135.08	90.42	16.59	-1,629.23	8,890.79	5,421.68	5,312.23	109.45	49.535
11,000.00	6,848.90	3,055.01	3,054.89	138.05	90.42	16.59	-1,629.23	8,890.79	5,350.29	5,240.57	109.71	48.766
11,100.00	6,848.92	3,055.01	3,054.89	141.02	90.42	16.59	-1,629.23	8,890.79	5,279.82	5,169.84	109.98	48.006
11,199.92	6,848.95	3,055.01	3,054.89	143.99	90.42	16.59	-1,629.23	8,890.79	5,210.37	5,100.11	110.26	47.256
11,200.00	6,848.95	3,055.01	3,054.89	144.00	90.42	16.59	-1,629.23	8,890.79	5,210.32	5,100.06	110.26	47.255
11,299.46	6,848.97	3,055.01	3,054.89	146.95	90.42	16.59	-1,629.23	8,890.79	5,142.19	5,031.65	110.54	46.519
11,300.00	6,848.97	3,055.01	3,054.89	146.97	90.42	16.59	-1,629.23	8,890.79	5,141.82	5,031.28	110.54	46.515
11,398.99	6,849.00	3,055.01	3,054.89	149.92	90.42	16.59	-1,629.23	8,890.79	5,075.05	4,964.23	110.82	45.794
11,400.00	6,849.00	3,055.01	3,054.89	149.95	90.42	16.59	-1,629.23	8,890.79	5,074.37	4,963.55	110.83	45.787
11,498.51	6,849.02	3,055.01	3,054.89	152.89	90.42	16.59	-1,629.23	8,890.79	5,008.99	4,897.88	111.11	45.081
11,500.00	6,849.02	3,055.01	3,054.89	152.93	90.42	16.59	-1,629.23	8,890.79	5,008.01	4,896.90	111.12	45.070
11,598.03	6,849.04	3,055.01	3,054.89	155.85	90.42	16.59	-1,629.23	8,890.79	4,944.05	4,832.65	111.40	44.381
11,600.00	6,849.04	3,055.01	3,054.89	155.91	90.42	16.59	-1,629.23	8,890.79	4,942.78	4,831.38	111.41	44.367
11,697.55	6,849.07	3,055.01	3,054.89	158.82	90.42	16.59	-1,629.23	8,890.79	4,880.29	4,768.59	111.69	43.694
11,700.00	6,849.07	3,055.01	3,054.89	158.90	90.42	16.59	-1,629.23	8,890.79	4,878.73	4,767.03	111.70	43.677
11,797.06	6,849.09	3,055.01	3,054.89	161.79	90.42	16.59	-1,629.23	8,890.79	4,817.73	4,705.75	111.98	43.022
11,800.00	6,849.09	3,055.01	3,054.89	161.88	90.42	16.59	-1,629.23	8,890.79	4,815.90	4,703.91	111.99	43.002
11,896.56	6,849.12	3,055.01	3,054.89	164.77	90.42	16.59	-1,629.23	8,890.79	4,756.45	4,644.17	112.27	42.365
11,900.00	6,849.12	3,055.01	3,054.89	164.87	90.42	16.59	-1,629.23	8,890.79	4,754.35	4,642.07	112.28	42.343
11,996.06	6,849.14	3,055.01	3,054.89	167.74	90.42	16.59	-1,629.23	8,890.79	4,696.47	4,583.91	112.56	41.724
12,000.00	6,849.14	3,055.01	3,054.89	167.86	90.42	16.59	-1,629.23	8,890.79	4,694.12	4,581.55	112.57	41.699
12,095.55	6,849.16	3,055.01	3,054.89	170.72	90.42	16.59	-1,629.23	8,890.79	4,637.86	4,525.01	112.84	41.100
12,100.00	6,849.17	3,055.01	3,054.89	170.85	90.42	16.59	-1,629.23	8,890.79	4,635.26	4,522.41	112.86	41.072
12,195.03	6,849.19	3,055.01	3,054.89	173.69	90.42	16.59	-1,629.23	8,890.79	4,580.66	4,467.54	113.12	40.493
12,200.00	6,849.19	3,055.01	3,054.89	173.84	90.42	16.59	-1,629.23	8,890.79	4,577.84	4,464.70	113.14	40.463
12,294.50	6,849.21	3,055.01	3,054.89	176.67	90.42	16.59	-1,629.23	8,890.79	4,524.93	4,411.54	113.39	39.905
12,300.00	6,849.21	3,055.01	3,054.89	176.84	90.42	16.59	-1,629.23	8,890.79	4,521.89	4,408.48	113.41	39.873
12,393.97	6,849.24	3,055.01	3,054.89	179.65	90.42	16.59	-1,629.23	8,890.79	4,470.72	4,357.06	113.66	39.335
12,400.00	6,849.24	3,055.01	3,054.89	179.83	90.42	16.59	-1,629.23	8,890.79	4,467.49	4,353.81	113.67	39.301
12,493.43	6,849.26	3,055.01	3,054.89	182.63	90.42	16.59	-1,629.23	8,890.79	4,418.09	4,304.18	113.91	38.785
12,500.00	6,849.26	3,055.01	3,054.89	182.83	90.42	16.59	-1,629.23	8,890.79	4,414.67	4,300.74	113.93	38.749
12,592.88	6,849.29	3,055.01	3,054.89	185.61	90.42	16.59	-1,629.23	8,890.79	4,367.10	4,252.94	114.16	38.255
12,600.00	6,849.29	3,055.01	3,054.89	185.82	90.42	16.59	-1,629.23	8,890.79	4,363.52	4,249.34	114.18	38.218
12,692.32	6,849.31	3,055.01	3,054.89	188.59	90.42	16.59	-1,629.23	8,890.79	4,317.80	4,203.41	114.39	37.745

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit 134S - OH - OH													Offset Site Error:	0.00 ft		
Survey Program:		0-INCLINOMETER					Offset		Semi Major Axis		Offset Wellbore Centre		Rule Assigned:		Offset Well Error:	0.00 ft
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	+N/-S	+E/-W	Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)					
12,700.00	6,849.31	3,055.01	3,054.89	188.82	90.42	16.59	-1,629.23	8,890.79	4,314.07	4,199.66	114.41	37.707				
12,791.75	6,849.33	3,055.01	3,054.89	191.57	90.42	16.59	-1,629.23	8,890.79	4,270.26	4,155.64	114.62	37.256				
12,800.00	6,849.34	3,055.01	3,054.89	191.82	90.42	16.59	-1,629.23	8,890.79	4,266.39	4,151.76	114.64	37.217				
12,891.17	6,849.36	3,055.01	3,054.89	194.56	90.42	16.59	-1,629.23	8,890.79	4,224.52	4,109.69	114.83	36.789				
12,900.00	6,849.36	3,055.01	3,054.89	194.82	90.42	16.59	-1,629.23	8,890.79	4,220.55	4,105.70	114.85	36.749				
12,990.59	6,849.38	3,055.01	3,054.89	197.54	90.42	16.59	-1,629.23	8,890.79	4,180.65	4,065.62	115.03	36.344				
13,000.00	6,849.38	3,055.01	3,054.89	197.82	90.42	16.59	-1,629.23	8,890.79	4,176.59	4,061.54	115.05	36.302				
13,089.99	6,849.41	3,055.01	3,054.89	200.53	90.42	16.59	-1,629.23	8,890.79	4,138.71	4,023.49	115.22	35.920				
13,100.00	6,849.41	3,055.01	3,054.89	200.83	90.42	16.59	-1,629.23	8,890.79	4,134.59	4,019.35	115.24	35.878				
13,189.38	6,849.43	3,055.01	3,054.89	203.51	90.42	16.59	-1,629.23	8,890.79	4,098.75	3,983.35	115.40	35.517				
13,200.00	6,849.43	3,055.01	3,054.89	203.83	90.42	16.59	-1,629.23	8,890.79	4,094.60	3,979.18	115.42	35.476				
13,288.77	6,849.45	3,055.01	3,054.89	206.50	90.42	16.59	-1,629.23	8,890.79	4,060.84	3,945.27	115.57	35.137				
13,300.00	6,849.46	3,055.01	3,054.89	206.83	90.42	16.59	-1,629.23	8,890.79	4,056.68	3,941.09	115.59	35.095				
13,388.14	6,849.48	3,055.01	3,054.89	209.48	90.42	16.59	-1,629.23	8,890.79	4,025.03	3,909.29	115.74	34.777				
13,400.00	6,849.48	3,055.01	3,054.89	209.84	90.42	16.59	-1,629.23	8,890.79	4,020.90	3,905.14	115.76	34.735				
13,487.50	6,849.50	3,055.01	3,054.89	212.47	90.42	16.59	-1,629.23	8,890.79	3,991.37	3,875.47	115.90	34.438				
13,500.00	6,849.50	3,055.01	3,054.89	212.84	90.42	16.59	-1,629.23	8,890.79	3,987.30	3,871.37	115.92	34.396				
13,586.85	6,849.53	3,055.01	3,054.89	215.46	90.42	16.59	-1,629.23	8,890.79	3,959.93	3,843.86	116.07	34.118				
13,600.00	6,849.53	3,055.01	3,054.89	215.85	90.42	16.59	-1,629.23	8,890.79	3,955.94	3,839.85	116.09	34.077				
13,686.20	6,849.55	3,055.01	3,054.89	218.44	90.42	16.59	-1,629.23	8,890.79	3,930.75	3,814.51	116.24	33.816				
13,700.00	6,849.55	3,055.01	3,054.89	218.86	90.42	16.59	-1,629.23	8,890.79	3,926.88	3,810.61	116.26	33.775				
13,785.53	6,849.57	3,055.01	3,054.89	221.43	90.42	16.59	-1,629.23	8,890.79	3,903.88	3,787.45	116.43	33.530				
13,800.00	6,849.58	3,055.01	3,054.89	221.87	90.42	16.59	-1,629.23	8,890.79	3,900.16	3,783.71	116.46	33.490				
13,884.85	6,849.60	3,055.01	3,054.89	224.42	90.42	16.59	-1,629.23	8,890.79	3,879.37	3,762.73	116.64	33.259				
13,900.00	6,849.60	3,055.01	3,054.89	224.87	90.42	16.59	-1,629.23	8,890.79	3,875.85	3,759.17	116.68	33.219				
13,984.17	6,849.62	3,055.01	3,054.89	227.41	90.42	16.59	-1,629.23	8,890.79	3,857.27	3,740.38	116.89	33.000				
14,000.00	6,849.63	3,055.01	3,054.89	227.88	90.42	16.59	-1,629.23	8,890.79	3,853.97	3,737.04	116.93	32.959				
14,083.48	6,849.65	3,055.01	3,054.89	230.40	90.42	16.59	-1,629.23	8,890.79	3,837.61	3,720.43	117.18	32.749				
14,100.00	6,849.65	3,055.01	3,054.89	230.89	90.42	16.59	-1,629.23	8,890.79	3,834.58	3,717.35	117.24	32.708				
14,182.79	6,849.67	3,055.01	3,054.89	233.39	90.42	16.59	-1,629.23	8,890.79	3,820.44	3,702.90	117.54	32.504				
14,200.00	6,849.67	3,055.01	3,054.89	233.90	90.42	16.59	-1,629.23	8,890.79	3,817.71	3,700.11	117.61	32.462				
14,282.09	6,849.69	3,055.01	3,054.89	236.38	90.42	16.59	-1,629.23	8,890.79	3,805.78	3,687.81	117.97	32.261				
14,300.00	6,849.70	3,055.01	3,054.89	236.92	90.42	16.59	-1,629.23	8,890.79	3,803.40	3,685.35	118.06	32.217				
14,381.39	6,849.72	3,055.01	3,054.89	239.37	90.42	16.59	-1,629.23	8,890.79	3,793.66	3,675.17	118.49	32.016				
14,400.00	6,849.72	3,055.01	3,054.89	239.93	90.42	16.59	-1,629.23	8,890.79	3,791.67	3,673.07	118.60	31.970				
14,480.69	6,849.74	3,055.01	3,054.89	242.36	90.42	16.59	-1,629.23	8,890.79	3,784.11	3,664.99	119.12	31.767				
14,500.00	6,849.75	3,055.01	3,054.89	242.94	90.42	16.59	-1,629.23	8,890.79	3,782.55	3,663.30	119.26	31.718				
14,579.99	6,849.77	3,055.01	3,054.89	245.35	90.42	16.59	-1,629.23	8,890.79	3,777.15	3,657.28	119.87	31.510				
14,600.00	6,849.77	3,055.01	3,054.89	245.95	90.42	16.59	-1,629.23	8,890.79	3,776.06	3,656.02	120.04	31.458				
14,679.30	6,849.79	3,055.01	3,054.89	248.34	90.42	16.59	-1,629.23	8,890.79	3,772.79	3,652.04	120.75	31.244				
14,700.00	6,849.80	3,055.01	3,054.89	248.96	90.42	16.59	-1,629.23	8,890.79	3,772.21	3,651.25	120.95	31.188				
14,798.05	6,849.82	3,055.01	3,054.89	251.92	90.42	16.59	-1,629.23	8,890.79	3,771.00	3,649.01	121.98	30.914 CC				
14,800.00	6,849.82	3,055.01	3,054.89	251.98	90.42	16.59	-1,629.23	8,890.79	3,771.00	3,648.99	122.01	30.908				
14,822.29	6,849.83	3,055.01	3,054.89	252.65	90.42	16.59	-1,629.23	8,890.79	3,771.09	3,648.83	122.26	30.845 ES				
14,900.00	6,849.84	3,055.01	3,054.89	254.99	90.42	16.59	-1,629.23	8,890.79	3,772.45	3,649.25	123.20	30.620				
15,000.00	6,849.87	3,055.01	3,054.89	258.01	90.42	16.59	-1,629.23	8,890.79	3,776.54	3,652.01	124.53	30.325				
15,100.00	6,849.89	3,055.01	3,054.89	261.02	90.42	16.59	-1,629.23	8,890.79	3,783.28	3,657.29	125.99	30.029				
15,200.00	6,849.92	3,055.01	3,054.89	264.04	90.42	16.59	-1,629.23	8,890.79	3,792.64	3,665.09	127.55	29.734				
15,300.00	6,849.94	3,055.01	3,054.89	267.05	90.42	16.59	-1,629.23	8,890.79	3,804.61	3,675.40	129.21	29.446				
15,400.00	6,849.97	3,055.01	3,054.89	270.07	90.42	16.59	-1,629.23	8,890.79	3,819.16	3,688.23	130.93	29.170				
15,500.00	6,849.99	3,055.01	3,054.89	273.08	90.42	16.59	-1,629.23	8,890.79	3,836.26	3,703.56	132.70	28.909				
15,600.00	6,850.01	3,055.01	3,054.89	276.10	90.42	16.59	-1,629.23	8,890.79	3,855.88	3,721.37	134.51	28.667				

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit 134S - OH - OH											Offset Site Error:	0.00 ft
Survey Program: 0-INCLINOMETER											Offset Well Error:	0.00 ft
Reference	Offset	Semi Major Axis		Distance		Rule Assigned:		Warning				
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor
15,700.00	6,850.04	3,055.01	3,054.89	279.12	90.42	16.59	-1,629.23	8,890.79	3,877.98	3,741.66	136.32	28.447
15,800.00	6,850.06	3,055.01	3,054.89	282.14	90.42	16.59	-1,629.23	8,890.79	3,902.52	3,764.38	138.13	28.252
15,900.00	6,850.09	3,055.01	3,054.89	285.15	90.42	16.59	-1,629.23	8,890.79	3,929.45	3,789.52	139.93	28.082
16,000.00	6,850.11	3,055.01	3,054.89	288.17	90.42	16.59	-1,629.23	8,890.79	3,958.72	3,817.03	141.69	27.939
16,100.00	6,850.13	3,055.01	3,054.89	291.19	90.42	16.59	-1,629.23	8,890.79	3,990.29	3,846.87	143.42	27.823
16,200.00	6,850.16	3,055.01	3,054.89	294.21	90.42	16.59	-1,629.23	8,890.79	4,024.09	3,879.00	145.09	27.734
16,300.00	6,850.18	3,055.01	3,054.89	297.23	90.42	16.59	-1,629.23	8,890.79	4,060.08	3,913.36	146.72	27.673
16,400.00	6,850.21	3,055.01	3,054.89	300.25	90.42	16.59	-1,629.23	8,890.79	4,098.19	3,949.91	148.28	27.638
16,500.00	6,850.23	3,055.01	3,054.89	303.27	90.42	16.59	-1,629.23	8,890.79	4,138.36	3,988.58	149.78	27.629 SF
16,600.00	6,850.26	3,055.01	3,054.89	306.28	90.42	16.59	-1,629.23	8,890.79	4,180.55	4,029.33	151.22	27.646
16,700.00	6,850.28	3,055.01	3,054.89	309.30	90.42	16.59	-1,629.23	8,890.79	4,224.68	4,072.09	152.58	27.687
16,800.00	6,850.30	3,055.01	3,054.89	312.32	90.42	16.59	-1,629.23	8,890.79	4,270.69	4,116.81	153.89	27.752
16,900.00	6,850.33	3,055.01	3,054.89	315.35	90.42	16.59	-1,629.23	8,890.79	4,318.53	4,163.41	155.12	27.840
17,000.00	6,850.35	3,055.01	3,054.89	318.37	90.42	16.59	-1,629.23	8,890.79	4,368.14	4,211.86	156.28	27.950
17,100.00	6,850.38	3,055.01	3,054.89	321.39	90.42	16.59	-1,629.23	8,890.79	4,419.45	4,262.07	157.38	28.081
17,200.00	6,850.40	3,055.01	3,054.89	324.41	90.42	16.59	-1,629.23	8,890.79	4,472.41	4,313.99	158.42	28.232
17,300.00	6,850.43	3,055.01	3,054.89	327.43	90.42	16.59	-1,629.23	8,890.79	4,526.96	4,367.57	159.39	28.402
17,400.00	6,850.45	3,055.01	3,054.89	330.45	90.42	16.59	-1,629.23	8,890.79	4,583.05	4,422.74	160.30	28.590
17,500.00	6,850.47	3,055.01	3,054.89	333.47	90.42	16.59	-1,629.23	8,890.79	4,640.61	4,479.45	161.15	28.796
17,600.00	6,850.50	3,055.01	3,054.89	336.49	90.42	16.59	-1,629.23	8,890.79	4,699.59	4,537.64	161.95	29.019
17,700.00	6,850.52	3,055.01	3,054.89	339.52	90.42	16.59	-1,629.23	8,890.79	4,759.94	4,597.25	162.69	29.258
17,800.00	6,850.55	3,055.01	3,054.89	342.54	90.42	16.59	-1,629.23	8,890.79	4,821.62	4,658.24	163.38	29.512
17,900.00	6,850.57	3,055.01	3,054.89	345.56	90.42	16.59	-1,629.23	8,890.79	4,884.56	4,720.54	164.02	29.781
18,000.00	6,850.59	3,055.01	3,054.89	348.58	90.42	16.59	-1,629.23	8,890.79	4,948.72	4,784.11	164.61	30.063
18,100.00	6,850.62	3,055.01	3,054.89	351.61	90.42	16.59	-1,629.23	8,890.79	5,014.05	4,848.90	165.16	30.359
18,200.00	6,850.64	3,055.01	3,054.89	354.63	90.42	16.59	-1,629.23	8,890.79	5,080.52	4,914.85	165.66	30.668
18,300.00	6,850.67	3,055.01	3,054.89	357.65	90.42	16.59	-1,629.23	8,890.79	5,148.06	4,981.94	166.13	30.988
18,400.00	6,850.69	3,055.01	3,054.89	360.67	90.42	16.59	-1,629.23	8,890.79	5,216.65	5,050.10	166.56	31.321
18,500.00	6,850.72	3,055.01	3,054.89	363.70	90.42	16.59	-1,629.23	8,890.79	5,286.25	5,119.30	166.95	31.664
18,600.00	6,850.74	3,055.01	3,054.89	366.72	90.42	16.59	-1,629.23	8,890.79	5,356.80	5,189.49	167.31	32.018
18,700.00	6,850.76	3,055.01	3,054.89	369.75	90.42	16.59	-1,629.23	8,890.79	5,428.28	5,260.65	167.63	32.382
18,800.00	6,850.79	3,055.01	3,054.89	372.77	90.42	16.59	-1,629.23	8,890.79	5,500.65	5,332.72	167.93	32.755
18,900.00	6,850.81	3,055.01	3,054.89	375.79	90.42	16.59	-1,629.23	8,890.79	5,573.87	5,405.67	168.20	33.138
19,000.00	6,850.84	3,055.01	3,054.89	378.82	90.42	16.59	-1,629.23	8,890.79	5,647.92	5,479.47	168.45	33.530
19,100.00	6,850.86	3,055.01	3,054.89	381.84	90.42	16.59	-1,629.23	8,890.79	5,722.75	5,554.09	168.67	33.930
19,200.00	6,850.89	3,055.01	3,054.89	384.87	90.42	16.59	-1,629.23	8,890.79	5,798.35	5,629.48	168.86	34.338
19,300.00	6,850.91	3,055.01	3,054.89	387.89	90.42	16.59	-1,629.23	8,890.79	5,874.67	5,705.63	169.04	34.753
19,400.00	6,850.93	3,055.01	3,054.89	390.91	90.42	16.59	-1,629.23	8,890.79	5,951.69	5,782.50	169.20	35.176
19,500.00	6,850.96	3,055.01	3,054.89	393.94	90.42	16.59	-1,629.23	8,890.79	6,029.39	5,860.06	169.33	35.607
19,600.00	6,850.98	3,055.01	3,054.89	396.96	90.42	16.59	-1,629.23	8,890.79	6,107.74	5,938.29	169.45	36.044
19,673.90	6,851.00	3,055.01	3,054.89	399.20	90.42	16.59	-1,629.23	8,890.79	6,166.04	5,996.51	169.53	36.371
19,700.00	6,851.01	3,055.01	3,054.89	399.99	90.42	16.59	-1,629.23	8,890.79	6,186.71	6,017.15	169.56	36.487
19,773.90	6,851.02	3,055.01	3,054.89	402.22	90.42	16.59	-1,629.23	8,890.79	6,245.46	6,075.83	169.63	36.819

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit 47B - Original Hole - As Drilled													Offset Site Error: 0.00 ft	
Survey Program: 200-UNKNOWN		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Rule Assigned: Distance				Offset Well Error: 30.00 ft	
Measured Reference Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
0.00	0.00	0.00	0.00	0.00	30.00	92.41	-481.49	11,451.49	11,463.00					
100.00	100.00	0.00	0.00	0.30	30.00	92.41	-481.49	11,451.49	11,461.88	11,431.58	30.30	378.314		
200.00	200.00	21.00	21.00	0.66	30.00	92.41	-481.49	11,451.49	11,461.61	11,430.95	30.66	373.842		
300.00	300.00	121.00	121.00	1.01	30.10	92.41	-481.49	11,451.49	11,461.61	11,430.49	31.11	368.399		
400.00	400.00	221.00	221.00	1.37	30.39	92.41	-481.49	11,451.49	11,461.61	11,429.84	31.76	360.872		
500.00	500.00	321.00	321.00	1.73	31.28	92.41	-481.49	11,451.49	11,461.61	11,428.60	33.01	347.250		
600.00	599.98	420.98	420.98	2.08	32.63	-32.33	-481.49	11,451.49	11,460.13	11,425.42	34.71	330.179		
700.00	699.84	520.84	520.84	2.42	34.40	-32.39	-481.49	11,451.49	11,455.71	11,418.89	36.82	311.151		
800.00	799.45	620.45	620.45	2.77	36.52	-32.49	-481.49	11,451.49	11,448.35	11,409.06	39.28	291.449		
900.00	898.70	719.70	719.70	3.13	38.92	-32.64	-481.49	11,451.49	11,438.05	11,396.02	42.04	272.098		
963.97	961.95	782.95	782.95	3.37	40.57	-32.75	-481.49	11,451.49	11,429.94	11,386.01	43.93	260.201		
1,000.00	997.50	818.50	818.50	3.51	41.55	-32.77	-481.49	11,451.49	11,425.03	11,380.00	45.03	253.723		
1,100.00	1,096.19	917.19	917.19	3.90	44.37	-32.81	-481.49	11,451.49	11,411.43	11,363.21	48.22	236.673		
1,200.00	1,194.89	1,015.89	1,015.89	4.30	47.35	-32.86	-481.49	11,451.49	11,397.83	11,346.26	51.57	221.023		
1,300.00	1,293.58	1,114.58	1,114.58	4.70	50.47	-32.90	-481.49	11,451.49	11,384.23	11,329.17	55.06	206.769		
1,400.00	1,392.27	1,213.27	1,213.27	5.11	53.69	-32.94	-481.49	11,451.49	11,370.64	11,311.98	58.66	193.842		
1,500.00	1,490.96	1,311.96	1,311.96	5.52	57.01	-32.99	-481.49	11,451.49	11,357.06	11,294.71	62.35	182.137		
1,600.00	1,589.65	1,410.65	1,410.65	5.94	60.40	-33.03	-481.49	11,451.49	11,343.49	11,277.36	66.13	171.539		
1,700.00	1,688.34	1,509.34	1,509.34	6.36	63.86	-33.08	-481.49	11,451.49	11,329.92	11,259.95	69.97	161.935		
1,800.00	1,787.03	1,608.03	1,608.03	6.78	67.37	-33.12	-481.49	11,451.49	11,316.36	11,242.50	73.86	153.214		
1,900.00	1,885.73	1,706.73	1,706.73	7.20	70.93	-33.17	-481.49	11,451.49	11,302.80	11,225.00	77.80	145.279		
2,000.00	1,984.42	1,805.42	1,805.42	7.62	74.52	-33.21	-481.49	11,451.49	11,289.26	11,207.47	81.78	138.040		
2,100.00	2,083.11	1,904.11	1,904.11	8.04	78.15	-33.25	-481.49	11,451.49	11,275.72	11,189.92	85.80	131.421		
2,200.00	2,181.80	2,002.80	2,002.80	8.46	81.81	-33.30	-481.49	11,451.49	11,262.18	11,172.34	89.84	125.351		
2,300.00	2,280.49	2,101.49	2,101.49	8.89	85.50	-33.34	-481.49	11,451.49	11,248.66	11,154.74	93.92	119.772		
2,400.00	2,379.18	2,200.18	2,200.18	9.31	89.20	-33.39	-481.49	11,451.49	11,235.13	11,137.12	98.01	114.629		
2,500.00	2,477.87	2,298.87	2,298.87	9.74	92.93	-33.43	-481.49	11,451.49	11,221.62	11,119.49	102.13	109.876		
2,600.00	2,576.56	2,397.56	2,397.56	10.16	96.68	-33.48	-481.49	11,451.49	11,208.12	11,101.85	106.26	105.475		
2,700.00	2,675.26	2,496.26	2,496.26	10.59	100.44	-33.53	-481.49	11,451.49	11,194.62	11,084.20	110.41	101.388		
2,800.00	2,773.95	2,594.95	2,594.95	11.02	104.21	-33.57	-481.49	11,451.49	11,181.12	11,066.55	114.58	97.585		
2,900.00	2,872.64	2,693.64	2,693.64	11.44	108.00	-33.62	-481.49	11,451.49	11,167.64	11,048.88	118.75	94.039		
3,000.00	2,971.33	2,792.33	2,792.33	11.87	111.79	-33.66	-481.49	11,451.49	11,154.16	11,031.22	122.94	90.726		
3,100.00	3,070.02	2,891.02	2,891.02	12.30	115.60	-33.71	-481.49	11,451.49	11,140.69	11,013.54	127.14	87.624		
3,200.00	3,168.71	2,989.71	2,989.71	12.73	119.42	-33.75	-481.49	11,451.49	11,127.22	10,995.87	131.35	84.714		
3,300.00	3,267.40	3,088.40	3,088.40	13.16	123.24	-33.80	-481.49	11,451.49	11,113.76	10,978.20	135.57	81.980		
3,400.00	3,366.10	3,187.10	3,187.10	13.58	127.08	-33.85	-481.49	11,451.49	11,100.31	10,960.52	139.79	79.406		
3,500.00	3,464.79	3,285.79	3,285.79	14.01	130.92	-33.89	-481.49	11,451.49	11,086.87	10,942.85	144.02	76.979		
3,600.00	3,563.48	3,384.48	3,384.48	14.44	134.76	-33.94	-481.49	11,451.49	11,073.44	10,925.17	148.26	74.688		
3,700.00	3,662.17	3,400.00	3,400.00	14.87	135.37	-33.95	-481.49	11,451.49	11,060.32	10,911.05	149.27	74.099		
3,800.00	3,760.86	3,400.00	3,400.00	15.30	135.37	-33.95	-481.49	11,451.49	11,048.08	10,898.43	149.65	73.824		
3,900.00	3,859.55	3,400.00	3,400.00	15.73	135.37	-33.95	-481.49	11,451.49	11,036.74	10,886.71	150.03	73.563		
4,000.00	3,958.24	3,400.00	3,400.00	16.16	135.37	-33.95	-481.49	11,451.49	11,026.29	10,875.89	150.40	73.314		
4,100.00	4,056.94	3,400.00	3,400.00	16.59	135.37	-33.95	-481.49	11,451.49	11,016.74	10,865.98	150.75	73.078		
4,200.00	4,155.63	3,400.00	3,400.00	17.02	135.37	-33.95	-481.49	11,451.49	11,008.08	10,856.99	151.10	72.854		
4,300.00	4,254.32	3,400.00	3,400.00	17.45	135.37	-33.95	-481.49	11,451.49	11,000.33	10,848.90	151.43	72.643		
4,400.00	4,353.01	3,400.00	3,400.00	17.88	135.37	-33.95	-481.49	11,451.49	10,993.49	10,841.74	151.75	72.445		
4,500.00	4,451.70	3,400.00	3,400.00	18.30	135.37	-33.95	-481.49	11,451.49	10,987.55	10,835.49	152.06	72.259		
4,600.00	4,550.39	3,400.00	3,400.00	18.73	135.37	-33.95	-481.49	11,451.49	10,982.52	10,830.16	152.36	72.085		
4,700.00	4,649.08	3,400.00	3,400.00	19.16	135.37	-33.95	-481.49	11,451.49	10,978.39	10,825.75	152.64	71.924		
4,800.00	4,747.77	3,400.00	3,400.00	19.59	135.37	-33.95	-481.49	11,451.49	10,975.18	10,822.27	152.91	71.774		
4,900.00	4,846.47	3,400.00	3,400.00	20.02	135.37	-33.95	-481.49	11,451.49	10,972.88	10,819.71	153.17	71.637		
5,000.00	4,945.16	3,400.00	3,400.00	20.45	135.37	-33.95	-481.49	11,451.49	10,971.49	10,818.07	153.42	71.513		

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit 47B - Original Hole - As Drilled											Offset Site Error:	0.00 ft
Survey Program: 200-UNKNOWN											Offset Well Error:	30.00 ft
Reference		Offset		Semi Major Axis			Offset Wellbore Centre		Distance			Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor
5,091.93	5,035.89	3,400.00	3,400.00	20.85	135.37	-33.95	-481.49	11,451.49	10,971.01	10,817.37	153.64	71.409
5,100.00	5,043.85	3,400.00	3,400.00	20.88	135.37	-33.95	-481.49	11,451.49	10,971.00	10,817.35	153.66	71.400
5,200.00	5,142.54	3,400.00	3,400.00	21.31	135.37	-33.95	-481.49	11,451.49	10,971.44	10,817.56	153.88	71.299
5,300.00	5,241.23	3,400.00	3,400.00	21.74	135.37	-33.95	-481.49	11,451.49	10,972.78	10,818.69	154.09	71.210
5,400.00	5,339.92	3,400.00	3,400.00	22.17	135.37	-33.95	-481.49	11,451.49	10,975.03	10,820.74	154.29	71.134
5,500.00	5,438.61	3,400.00	3,400.00	22.61	135.37	-33.95	-481.49	11,451.49	10,978.19	10,823.72	154.47	71.068
5,600.00	5,537.31	3,400.00	3,400.00	23.04	135.37	-33.95	-481.49	11,451.49	10,982.27	10,827.62	154.65	71.015
5,700.00	5,636.00	3,400.00	3,400.00	23.47	135.37	-33.95	-481.49	11,451.49	10,987.25	10,832.44	154.81	70.974
5,800.00	5,734.69	3,400.00	3,400.00	23.90	135.37	-33.95	-481.49	11,451.49	10,993.14	10,838.18	154.96	70.944
5,900.00	5,833.38	3,400.00	3,400.00	24.33	135.37	-33.95	-481.49	11,451.49	10,999.93	10,844.84	155.09	70.925
6,000.00	5,932.07	3,400.00	3,400.00	24.76	135.37	-33.95	-481.49	11,451.49	11,007.63	10,852.42	155.22	70.918
6,100.00	6,030.76	3,400.00	3,400.00	25.19	135.37	-33.95	-481.49	11,451.49	11,016.23	10,860.91	155.33	70.923
6,200.00	6,129.45	3,400.00	3,400.00	25.62	135.37	-33.95	-481.49	11,451.49	11,025.74	10,870.31	155.43	70.939
6,300.00	6,228.15	3,400.00	3,400.00	26.05	135.37	-33.95	-481.49	11,451.49	11,036.14	10,880.63	155.51	70.967
6,370.81	6,298.03	3,400.00	3,400.00	26.35	135.37	-33.95	-481.49	11,451.49	11,044.04	10,888.48	155.57	70.993
6,400.00	6,326.74	3,400.00	3,400.00	26.48	135.37	-26.48	-481.49	11,451.49	11,046.77	10,891.18	155.59	71.001
6,450.00	6,375.33	3,400.00	3,400.00	26.73	135.37	-18.92	-481.49	11,451.49	11,048.51	10,892.88	155.62	70.995
6,500.00	6,422.93	3,400.00	3,400.00	26.99	135.37	-14.58	-481.49	11,451.49	11,046.55	10,890.89	155.66	70.964
6,550.00	6,469.25	3,400.00	3,400.00	27.29	135.37	-11.80	-481.49	11,451.49	11,040.91	10,885.20	155.70	70.909
6,600.00	6,513.99	3,400.00	3,400.00	27.61	135.37	-9.89	-481.49	11,451.49	11,031.61	10,875.86	155.74	70.831
6,650.00	6,556.88	3,400.00	3,400.00	27.96	135.37	-8.49	-481.49	11,451.49	11,018.69	10,862.91	155.78	70.731
6,700.00	6,597.66	3,400.00	3,400.00	28.34	135.37	-7.43	-481.49	11,451.49	11,002.23	10,846.41	155.82	70.609
6,750.00	6,636.07	3,400.00	3,400.00	28.76	135.37	-6.60	-481.49	11,451.49	10,982.32	10,826.47	155.85	70.466
6,800.00	6,671.88	3,400.00	3,400.00	29.21	135.37	-5.92	-481.49	11,451.49	10,959.05	10,803.17	155.88	70.303
6,850.00	6,704.87	3,400.00	3,400.00	29.71	135.37	-5.36	-481.49	11,451.49	10,932.55	10,776.64	155.91	70.122
6,900.00	6,734.84	3,400.00	3,400.00	30.25	135.37	-4.88	-481.49	11,451.49	10,902.96	10,747.03	155.93	69.923
6,950.00	6,761.59	3,400.00	3,400.00	30.85	135.37	-4.45	-481.49	11,451.49	10,870.44	10,714.49	155.94	69.708
7,000.00	6,784.97	3,400.00	3,400.00	31.50	135.37	-4.06	-481.49	11,451.49	10,835.16	10,679.20	155.95	69.478
7,050.00	6,804.83	3,400.00	3,400.00	32.20	135.37	-3.69	-481.49	11,451.49	10,797.31	10,641.36	155.95	69.234
7,100.00	6,821.05	3,400.00	3,400.00	32.96	135.37	-3.31	-481.49	11,451.49	10,757.11	10,601.15	155.95	68.977
7,150.00	6,833.53	3,400.00	3,400.00	33.77	135.37	-2.90	-481.49	11,451.49	10,714.76	10,558.82	155.94	68.709
7,200.00	6,842.18	3,400.00	3,400.00	34.62	135.37	-2.41	-481.49	11,451.49	10,670.53	10,514.59	155.93	68.431
7,250.00	6,846.97	3,400.00	3,400.00	35.52	135.37	-1.77	-481.49	11,451.49	10,624.64	10,468.72	155.92	68.143
7,286.15	6,848.00	3,400.00	3,400.00	36.18	135.37	-1.15	-481.49	11,451.49	10,590.59	10,434.68	155.90	67.930
7,300.00	6,848.00	3,400.00	3,400.00	36.44	135.37	-1.15	-481.49	11,451.49	10,577.41	10,421.52	155.90	67.848
7,400.00	6,848.03	3,400.00	3,400.00	38.40	135.37	-1.15	-481.49	11,451.49	10,482.37	10,326.51	155.85	67.259
7,500.00	6,848.05	3,400.00	3,400.00	40.49	135.37	-1.15	-481.49	11,451.49	10,387.41	10,231.61	155.80	66.670
7,600.00	6,848.08	3,400.00	3,400.00	42.70	135.37	-1.15	-481.49	11,451.49	10,292.55	10,136.79	155.76	66.081
7,700.00	6,848.10	3,400.00	3,400.00	45.01	135.37	-1.15	-481.49	11,451.49	10,197.79	10,042.08	155.71	65.492
7,800.00	6,848.12	3,400.00	3,400.00	47.40	135.37	-1.15	-481.49	11,451.49	10,103.12	9,947.46	155.66	64.903
7,900.00	6,848.15	3,400.00	3,400.00	49.86	135.37	-1.15	-481.49	11,451.49	10,008.57	9,852.95	155.62	64.315
8,000.00	6,848.17	3,400.00	3,400.00	52.39	135.37	-1.15	-481.49	11,451.49	9,914.12	9,758.54	155.57	63.726
8,100.00	6,848.20	3,400.00	3,400.00	54.96	135.37	-1.15	-481.49	11,451.49	9,819.77	9,664.24	155.53	63.138
8,200.00	6,848.22	3,400.00	3,400.00	57.58	135.37	-1.15	-481.49	11,451.49	9,725.55	9,570.06	155.49	62.550
8,300.00	6,848.25	3,400.00	3,400.00	60.24	135.37	-1.15	-481.49	11,451.49	9,631.43	9,475.99	155.44	61.962
8,400.00	6,848.27	3,400.00	3,400.00	62.94	135.37	-1.15	-481.49	11,451.49	9,537.44	9,382.05	155.40	61.375
8,500.00	6,848.29	3,400.00	3,400.00	65.66	135.37	-1.15	-481.49	11,451.49	9,443.57	9,288.22	155.35	60.787
8,600.00	6,848.32	3,400.00	3,400.00	68.42	135.37	-1.15	-481.49	11,451.49	9,349.83	9,194.52	155.31	60.201
8,700.00	6,848.34	3,400.00	3,400.00	71.19	135.37	-1.15	-481.49	11,451.49	9,256.22	9,100.95	155.27	59.614
8,800.00	6,848.37	3,400.00	3,400.00	73.99	135.37	-1.15	-481.49	11,451.49	9,162.75	9,007.52	155.23	59.029
8,900.00	6,848.39	3,400.00	3,400.00	76.80	135.37	-1.15	-481.49	11,451.49	9,069.41	8,914.23	155.18	58.443
9,000.00	6,848.42	3,400.00	3,400.00	79.63	135.37	-1.15	-481.49	11,451.49	8,976.22	8,821.08	155.14	57.859

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit 47B - Original Hole - As Drilled											Offset Site Error:	0.00 ft
Survey Program: 200-UNKNOWN											Offset Well Error:	30.00 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor
9,100.00	6,848.44	3,400.00	3,400.00	82.47	135.37	-1.15	-481.49	11,451.49	8,883.17	8,728.08	155.10	57.275
9,200.00	6,848.46	3,400.00	3,400.00	85.33	135.37	-1.15	-481.49	11,451.49	8,790.28	8,635.23	155.05	56.691
9,300.00	6,848.49	3,400.00	3,400.00	88.20	135.37	-1.15	-481.49	11,451.49	8,697.55	8,542.54	155.01	56.109
9,400.00	6,848.51	3,400.00	3,400.00	91.08	135.37	-1.15	-481.49	11,451.49	8,604.98	8,450.01	154.97	55.527
9,500.00	6,848.54	3,400.00	3,400.00	93.97	135.37	-1.15	-481.49	11,451.49	8,512.57	8,357.65	154.93	54.946
9,600.00	6,848.56	3,400.00	3,400.00	96.87	135.37	-1.15	-481.49	11,451.49	8,420.35	8,265.46	154.88	54.366
9,700.00	6,848.58	3,400.00	3,400.00	99.77	135.37	-1.15	-481.49	11,451.49	8,328.29	8,173.46	154.84	53.787
9,800.00	6,848.61	3,400.00	3,400.00	102.69	135.37	-1.15	-481.49	11,451.49	8,236.43	8,081.64	154.79	53.209
9,900.00	6,848.63	3,400.00	3,400.00	105.61	135.37	-1.15	-481.49	11,451.49	8,144.76	7,990.01	154.75	52.632
10,000.00	6,848.66	3,400.00	3,400.00	108.53	135.37	-1.15	-481.49	11,451.49	8,053.28	7,898.58	154.70	52.056
10,100.00	6,848.68	3,400.00	3,400.00	111.46	135.37	-1.15	-481.49	11,451.49	7,962.01	7,807.35	154.66	51.482
10,200.00	6,848.71	3,400.00	3,400.00	114.40	135.37	-1.15	-481.49	11,451.49	7,870.95	7,716.34	154.61	50.909
10,300.00	6,848.73	3,400.00	3,400.00	117.34	135.37	-1.15	-481.49	11,451.49	7,780.12	7,625.55	154.56	50.337
10,400.00	6,848.75	3,400.00	3,400.00	120.29	135.37	-1.15	-481.49	11,451.49	7,689.50	7,534.99	154.51	49.767
10,500.00	6,848.78	3,400.00	3,400.00	123.24	135.37	-1.15	-481.49	11,451.49	7,599.13	7,444.67	154.46	49.198
10,600.00	6,848.80	3,400.00	3,400.00	126.20	135.37	-1.15	-481.49	11,451.49	7,509.00	7,354.59	154.41	48.632
10,700.00	6,848.83	3,400.00	3,400.00	129.16	135.37	-1.15	-481.49	11,451.49	7,419.12	7,264.77	154.35	48.067
10,800.00	6,848.85	3,400.00	3,400.00	132.12	135.37	-1.15	-481.49	11,451.49	7,329.50	7,175.21	154.29	47.504
10,900.00	6,848.88	3,400.00	3,400.00	135.08	135.37	-1.15	-481.49	11,451.49	7,240.16	7,085.93	154.23	46.943
11,000.00	6,848.90	3,400.00	3,400.00	138.05	135.37	-1.15	-481.49	11,451.49	7,151.10	6,996.93	154.17	46.384
11,100.00	6,848.92	3,400.00	3,400.00	141.02	135.37	-1.15	-481.49	11,451.49	7,062.33	6,908.22	154.10	45.828
11,200.00	6,848.95	3,400.00	3,400.00	144.00	135.37	-1.15	-481.49	11,451.49	6,973.86	6,819.83	154.04	45.274
11,300.00	6,848.97	3,400.00	3,400.00	146.97	135.37	-1.15	-481.49	11,451.49	6,885.71	6,731.75	153.96	44.723
11,400.00	6,849.00	3,400.00	3,400.00	149.95	135.37	-1.15	-481.49	11,451.49	6,797.89	6,644.00	153.89	44.175
11,500.00	6,849.02	3,400.00	3,400.00	152.93	135.37	-1.15	-481.49	11,451.49	6,710.41	6,556.60	153.81	43.629
11,600.00	6,849.04	3,400.00	3,400.00	155.91	135.37	-1.15	-481.49	11,451.49	6,623.28	6,469.56	153.72	43.087
11,700.00	6,849.07	3,400.00	3,400.00	158.90	135.37	-1.15	-481.49	11,451.49	6,536.53	6,382.90	153.63	42.548
11,800.00	6,849.09	3,400.00	3,400.00	161.88	135.37	-1.15	-481.49	11,451.49	6,450.15	6,296.62	153.53	42.012
11,900.00	6,849.12	3,400.00	3,400.00	164.87	135.37	-1.15	-481.49	11,451.49	6,364.18	6,210.75	153.43	41.480
12,000.00	6,849.14	3,400.00	3,400.00	167.86	135.37	-1.15	-481.49	11,451.49	6,278.62	6,125.30	153.32	40.952
12,100.00	6,849.17	3,400.00	3,400.00	170.85	135.37	-1.15	-481.49	11,451.49	6,193.49	6,040.29	153.20	40.428
12,200.00	6,849.19	3,400.00	3,400.00	173.84	135.37	-1.15	-481.49	11,451.49	6,108.81	5,955.74	153.07	39.908
12,300.00	6,849.21	3,400.00	3,400.00	176.84	135.37	-1.15	-481.49	11,451.49	6,024.60	5,871.67	152.94	39.393
12,400.00	6,849.24	3,400.00	3,400.00	179.83	135.37	-1.15	-481.49	11,451.49	5,940.89	5,788.10	152.79	38.883
12,500.00	6,849.26	3,400.00	3,400.00	182.83	135.37	-1.15	-481.49	11,451.49	5,857.68	5,705.05	152.63	38.378
12,600.00	6,849.29	3,400.00	3,400.00	185.82	135.37	-1.15	-481.49	11,451.49	5,775.01	5,622.55	152.46	37.878
12,700.00	6,849.31	3,400.00	3,400.00	188.82	135.37	-1.15	-481.49	11,451.49	5,692.89	5,540.61	152.28	37.384
12,800.00	6,849.34	3,400.00	3,400.00	191.82	135.37	-1.15	-481.49	11,451.49	5,611.35	5,459.27	152.08	36.897
12,900.00	6,849.36	3,400.00	3,400.00	194.82	135.37	-1.15	-481.49	11,451.49	5,530.42	5,378.55	151.87	36.415
13,000.00	6,849.38	3,400.00	3,400.00	197.82	135.37	-1.15	-481.49	11,451.49	5,450.12	5,298.48	151.64	35.941
13,100.00	6,849.41	3,400.00	3,400.00	200.83	135.37	-1.15	-481.49	11,451.49	5,370.49	5,219.09	151.39	35.473
13,200.00	6,849.43	3,400.00	3,400.00	203.83	135.37	-1.15	-481.49	11,451.49	5,291.54	5,140.41	151.13	35.014
13,300.00	6,849.46	3,400.00	3,400.00	206.83	135.37	-1.15	-481.49	11,451.49	5,213.32	5,062.48	150.84	34.562
13,400.00	6,849.48	3,400.00	3,400.00	209.84	135.37	-1.15	-481.49	11,451.49	5,135.85	4,985.33	150.53	34.119
13,500.00	6,849.50	3,400.00	3,400.00	212.84	135.37	-1.15	-481.49	11,451.49	5,059.18	4,908.99	150.19	33.685
13,600.00	6,849.53	3,400.00	3,400.00	215.85	135.37	-1.15	-481.49	11,451.49	4,983.33	4,833.50	149.82	33.261
13,700.00	6,849.55	3,400.00	3,400.00	218.86	135.37	-1.15	-481.49	11,451.49	4,908.34	4,758.91	149.43	32.847
13,800.00	6,849.58	3,400.00	3,400.00	221.87	135.37	-1.15	-481.49	11,451.49	4,834.26	4,685.26	149.00	32.444
13,900.00	6,849.60	3,400.00	3,400.00	224.87	135.37	-1.15	-481.49	11,451.49	4,761.13	4,612.59	148.54	32.052
14,000.00	6,849.63	3,400.00	3,400.00	227.88	135.37	-1.15	-481.49	11,451.49	4,689.00	4,540.95	148.04	31.673
14,099.94	6,849.65	3,400.00	3,400.00	230.89	135.37	-1.15	-481.49	11,451.49	4,617.94	4,470.43	147.51	31.307
14,100.00	6,849.65	3,400.00	3,400.00	230.89	135.37	-1.15	-481.49	11,451.49	4,617.90	4,470.39	147.51	31.306

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit 47B - Original Hole - As Drilled												Offset Site Error:	0.00 ft
Survey Program: 200-UNKNOWN												Offset Well Error:	30.00 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (ft)	Separation Factor	Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)			
14,199.43	6,849.67	3,400.00	3,400.00	233.89	135.37	-1.15	-481.49	11,451.49	4,548.28	4,401.35	146.93	30.956	
14,200.00	6,849.67	3,400.00	3,400.00	233.90	135.37	-1.15	-481.49	11,451.49	4,547.88	4,400.96	146.92	30.954	
14,298.91	6,849.70	3,400.00	3,400.00	236.88	135.37	-1.15	-481.49	11,451.49	4,479.76	4,333.45	146.30	30.620	
14,300.00	6,849.70	3,400.00	3,400.00	236.92	135.37	-1.15	-481.49	11,451.49	4,479.01	4,332.71	146.30	30.616	
14,398.38	6,849.72	3,400.00	3,400.00	239.88	135.37	-1.15	-481.49	11,451.49	4,412.41	4,266.78	145.63	30.299	
14,400.00	6,849.72	3,400.00	3,400.00	239.93	135.37	-1.15	-481.49	11,451.49	4,411.33	4,265.71	145.62	30.294	
14,497.85	6,849.75	3,400.00	3,400.00	242.87	135.37	-1.15	-481.49	11,451.49	4,346.31	4,201.40	144.90	29.995	
14,500.00	6,849.75	3,400.00	3,400.00	242.94	135.37	-1.15	-481.49	11,451.49	4,344.89	4,200.01	144.89	29.988	
14,597.31	6,849.77	3,400.00	3,400.00	245.87	135.37	-1.15	-481.49	11,451.49	4,281.50	4,137.38	144.12	29.708	
14,600.00	6,849.77	3,400.00	3,400.00	245.95	135.37	-1.15	-481.49	11,451.49	4,279.76	4,135.67	144.10	29.700	
14,696.76	6,849.79	3,400.00	3,400.00	248.87	135.37	-1.15	-481.49	11,451.49	4,218.04	4,074.77	143.28	29.440	
14,700.00	6,849.80	3,400.00	3,400.00	248.96	135.37	-1.15	-481.49	11,451.49	4,216.00	4,072.75	143.25	29.432	
14,796.21	6,849.82	3,400.00	3,400.00	251.86	135.37	-1.15	-481.49	11,451.49	4,156.00	4,013.63	142.37	29.192	
14,800.00	6,849.82	3,400.00	3,400.00	251.98	135.37	-1.15	-481.49	11,451.49	4,153.67	4,011.33	142.33	29.183	
14,895.65	6,849.84	3,400.00	3,400.00	254.86	135.37	-1.15	-481.49	11,451.49	4,095.44	3,954.05	141.39	28.966	
14,900.00	6,849.84	3,400.00	3,400.00	254.99	135.37	-1.15	-481.49	11,451.49	4,092.83	3,951.48	141.35	28.956	
14,995.08	6,849.87	3,400.00	3,400.00	257.86	135.37	-1.15	-481.49	11,451.49	4,036.43	3,896.09	140.34	28.762	
15,000.00	6,849.87	3,400.00	3,400.00	258.01	135.37	-1.15	-481.49	11,451.49	4,033.55	3,893.26	140.29	28.752	
15,094.50	6,849.89	3,400.00	3,400.00	260.86	135.37	-1.15	-481.49	11,451.49	3,979.03	3,839.82	139.21	28.582	
15,100.00	6,849.89	3,400.00	3,400.00	261.02	135.37	-1.15	-481.49	11,451.49	3,975.90	3,836.75	139.15	28.573	
15,193.91	6,849.92	3,400.00	3,400.00	263.85	135.37	-1.15	-481.49	11,451.49	3,923.32	3,785.32	138.00	28.429	
15,200.00	6,849.92	3,400.00	3,400.00	264.04	135.37	-1.15	-481.49	11,451.49	3,919.96	3,782.03	137.93	28.421	
15,293.30	6,849.94	3,400.00	3,400.00	266.85	135.37	-1.15	-481.49	11,451.49	3,869.36	3,732.66	136.71	28.304	
15,300.00	6,849.94	3,400.00	3,400.00	267.05	135.37	-1.15	-481.49	11,451.49	3,865.79	3,729.18	136.62	28.297	
15,392.69	6,849.96	3,400.00	3,400.00	269.85	135.37	-1.15	-481.49	11,451.49	3,817.24	3,681.92	135.32	28.209	
15,400.00	6,849.97	3,400.00	3,400.00	270.07	135.37	-1.15	-481.49	11,451.49	3,813.48	3,678.27	135.21	28.203	
15,492.07	6,849.99	3,400.00	3,400.00	272.84	135.37	-1.15	-481.49	11,451.49	3,767.02	3,633.19	133.84	28.146	
15,500.00	6,849.99	3,400.00	3,400.00	273.08	135.37	-1.15	-481.49	11,451.49	3,763.10	3,629.39	133.71	28.143	
15,591.43	6,850.01	3,400.00	3,400.00	275.84	135.37	-1.15	-481.49	11,451.49	3,718.79	3,586.54	132.25	28.118	
15,600.00	6,850.01	3,400.00	3,400.00	276.10	135.37	-1.15	-481.49	11,451.49	3,714.73	3,582.62	132.11	28.118	
15,690.79	6,850.04	3,400.00	3,400.00	278.84	135.37	-1.15	-481.49	11,451.49	3,672.62	3,542.05	130.57	28.128	
15,700.00	6,850.04	3,400.00	3,400.00	279.12	135.37	-1.15	-481.49	11,451.49	3,668.45	3,538.04	130.41	28.131	
15,790.13	6,850.06	3,400.00	3,400.00	281.84	135.37	-1.15	-481.49	11,451.49	3,628.59	3,499.81	128.78	28.178	
15,800.00	6,850.06	3,400.00	3,400.00	282.14	135.37	-1.15	-481.49	11,451.49	3,624.33	3,495.74	128.59	28.185	
15,889.46	6,850.08	3,400.00	3,400.00	284.83	135.37	-1.15	-481.49	11,451.49	3,586.77	3,459.90	126.87	28.271	
15,900.00	6,850.09	3,400.00	3,400.00	285.15	135.37	-1.15	-481.49	11,451.49	3,582.47	3,455.80	126.66	28.284	
15,988.77	6,850.11	3,400.00	3,400.00	287.83	135.37	-1.15	-481.49	11,451.49	3,547.25	3,422.40	124.85	28.411	
16,000.00	6,850.11	3,400.00	3,400.00	288.17	135.37	-1.15	-481.49	11,451.49	3,542.93	3,418.31	124.62	28.430	
16,088.07	6,850.13	3,400.00	3,400.00	290.83	135.37	-1.15	-481.49	11,451.49	3,510.10	3,387.38	122.72	28.603	
16,100.00	6,850.13	3,400.00	3,400.00	291.19	135.37	-1.15	-481.49	11,451.49	3,505.80	3,383.35	122.45	28.630	
16,187.36	6,850.16	3,400.00	3,400.00	293.83	135.37	-1.15	-481.49	11,451.49	3,475.39	3,354.93	120.47	28.850	
16,200.00	6,850.16	3,400.00	3,400.00	294.21	135.37	-1.15	-481.49	11,451.49	3,471.15	3,350.98	120.17	28.885	
16,286.64	6,850.18	3,400.00	3,400.00	296.82	135.37	-1.15	-481.49	11,451.49	3,443.21	3,325.11	118.09	29.157	
16,300.00	6,850.18	3,400.00	3,400.00	297.23	135.37	-1.15	-481.49	11,451.49	3,439.07	3,321.30	117.76	29.203	
16,385.90	6,850.20	3,400.00	3,400.00	299.82	135.37	-1.15	-481.49	11,451.49	3,413.61	3,298.00	115.60	29.529	
16,400.00	6,850.21	3,400.00	3,400.00	300.25	135.37	-1.15	-481.49	11,451.49	3,409.62	3,294.38	115.24	29.588	
16,485.16	6,850.23	3,400.00	3,400.00	302.82	135.37	-1.15	-481.49	11,451.49	3,386.66	3,273.67	112.99	29.973	
16,500.00	6,850.23	3,400.00	3,400.00	303.27	135.37	-1.15	-481.49	11,451.49	3,382.86	3,270.27	112.59	30.046	
16,584.40	6,850.25	3,400.00	3,400.00	305.81	135.37	-1.15	-481.49	11,451.49	3,362.43	3,252.17	110.26	30.495	
16,600.00	6,850.26	3,400.00	3,400.00	306.28	135.37	-1.15	-481.49	11,451.49	3,358.88	3,249.05	109.82	30.584	
16,683.63	6,850.28	3,400.00	3,400.00	308.81	135.37	-1.15	-481.49	11,451.49	3,340.98	3,233.56	107.42	31.102	
16,700.00	6,850.28	3,400.00	3,400.00	309.30	135.37	-1.15	-481.49	11,451.49	3,337.71	3,230.77	106.94	31.210	

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit 47B - Original Hole - As Drilled												Offset Site Error:	0.00 ft
Survey Program: 200-UNKNOWN												Offset Well Error:	30.00 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (ft)	Separation Factor	Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)			
16,782.86	6,850.30	3,400.00	3,400.00	311.81	135.37	-1.15	-481.49	11,451.49	3,322.36	3,217.89	104.47	31.801	
16,800.00	6,850.30	3,400.00	3,400.00	312.32	135.37	-1.15	-481.49	11,451.49	3,319.43	3,215.48	103.95	31.932	
16,882.07	6,850.32	3,400.00	3,400.00	314.80	135.37	-1.15	-481.49	11,451.49	3,306.61	3,205.19	101.42	32.603	
16,900.00	6,850.33	3,400.00	3,400.00	315.35	135.37	-1.15	-481.49	11,451.49	3,304.07	3,203.21	100.86	32.759	
16,981.29	6,850.35	3,400.00	3,400.00	317.80	135.37	-1.15	-481.49	11,451.49	3,293.77	3,195.49	98.28	33.513	
17,000.00	6,850.35	3,400.00	3,400.00	318.37	135.37	-1.15	-481.49	11,451.49	3,291.68	3,194.00	97.68	33.698	
17,080.50	6,850.37	3,400.00	3,400.00	320.80	135.37	-1.15	-481.49	11,451.49	3,283.89	3,188.81	95.08	34.539	
17,100.00	6,850.38	3,400.00	3,400.00	321.39	135.37	-1.15	-481.49	11,451.49	3,282.30	3,187.85	94.44	34.754	
17,179.69	6,850.40	3,400.00	3,400.00	323.79	135.37	-1.15	-481.49	11,451.49	3,276.98	3,185.12	91.86	35.672	
17,200.00	6,850.40	3,400.00	3,400.00	324.41	135.37	-1.15	-481.49	11,451.49	3,275.93	3,184.72	91.22	35.913	
17,278.81	6,850.42	3,400.00	3,400.00	326.79	135.37	-1.15	-481.49	11,451.49	3,273.07	3,184.18	88.89	36.822	
17,300.00	6,850.43	3,400.00	3,400.00	327.43	135.37	-1.15	-481.49	11,451.49	3,272.62	3,184.24	88.38	37.029	
17,400.00	6,850.45	3,400.00	3,400.00	330.45	135.37	-1.15	-481.49	11,451.49	3,272.36	3,183.89	88.47	36.989	CC
17,500.00	6,850.47	3,400.00	3,400.00	333.47	135.37	-1.15	-481.49	11,451.49	3,275.15	3,182.97	92.18	35.530	ES
17,600.00	6,850.50	3,400.00	3,400.00	336.49	135.37	-1.15	-481.49	11,451.49	3,280.99	3,184.51	96.48	34.008	
17,700.00	6,850.52	3,400.00	3,400.00	339.52	135.37	-1.15	-481.49	11,451.49	3,289.86	3,189.05	100.81	32.634	
17,800.00	6,850.55	3,400.00	3,400.00	342.54	135.37	-1.15	-481.49	11,451.49	3,301.73	3,196.65	105.08	31.421	
17,900.00	6,850.57	3,400.00	3,400.00	345.56	135.37	-1.15	-481.49	11,451.49	3,316.58	3,207.33	109.25	30.357	
18,000.00	6,850.59	3,400.00	3,400.00	348.58	135.37	-1.15	-481.49	11,451.49	3,334.37	3,221.06	113.31	29.426	
18,100.00	6,850.62	3,400.00	3,400.00	351.61	135.37	-1.15	-481.49	11,451.49	3,355.04	3,237.80	117.24	28.616	
18,200.00	6,850.64	3,400.00	3,400.00	354.63	135.37	-1.15	-481.49	11,451.49	3,378.55	3,257.51	121.04	27.912	
18,300.00	6,850.67	3,400.00	3,400.00	357.65	135.37	-1.15	-481.49	11,451.49	3,404.83	3,280.13	124.70	27.305	
18,400.00	6,850.69	3,400.00	3,400.00	360.67	135.37	-1.15	-481.49	11,451.49	3,433.82	3,305.62	128.21	26.783	
18,500.00	6,850.72	3,400.00	3,400.00	363.70	135.37	-1.15	-481.49	11,451.49	3,465.46	3,333.89	131.57	26.339	
18,600.00	6,850.74	3,400.00	3,400.00	366.72	135.37	-1.15	-481.49	11,451.49	3,499.67	3,364.89	134.79	25.964	
18,700.00	6,850.76	3,400.00	3,400.00	369.75	135.37	-1.15	-481.49	11,451.49	3,536.38	3,398.53	137.85	25.653	
18,800.00	6,850.79	3,400.00	3,400.00	372.77	135.37	-1.15	-481.49	11,451.49	3,575.51	3,434.74	140.77	25.399	
18,900.00	6,850.81	3,400.00	3,400.00	375.79	135.37	-1.15	-481.49	11,451.49	3,616.98	3,473.44	143.54	25.198	
19,000.00	6,850.84	3,400.00	3,400.00	378.82	135.37	-1.15	-481.49	11,451.49	3,660.72	3,514.54	146.17	25.044	
19,100.00	6,850.86	3,400.00	3,400.00	381.84	135.37	-1.15	-481.49	11,451.49	3,706.63	3,557.97	148.66	24.933	
19,200.00	6,850.89	3,400.00	3,400.00	384.87	135.37	-1.15	-481.49	11,451.49	3,754.65	3,603.64	151.02	24.862	
19,300.00	6,850.91	3,400.00	3,400.00	387.89	135.37	-1.15	-481.49	11,451.49	3,804.69	3,651.46	153.24	24.829	
19,400.00	6,850.93	3,400.00	3,400.00	390.91	135.37	-1.15	-481.49	11,451.49	3,856.68	3,701.35	155.33	24.828	SF
19,500.00	6,850.96	3,400.00	3,400.00	393.94	135.37	-1.15	-481.49	11,451.49	3,910.53	3,753.23	157.31	24.859	
19,600.00	6,850.98	3,400.00	3,400.00	396.96	135.37	-1.15	-481.49	11,451.49	3,966.18	3,807.01	159.16	24.919	
19,673.90	6,851.00	3,400.00	3,400.00	399.20	135.37	-1.15	-481.49	11,451.49	4,008.40	3,847.94	160.46	24.980	
19,700.00	6,851.01	3,400.00	3,400.00	399.99	135.37	-1.15	-481.49	11,451.49	4,023.53	3,862.63	160.91	25.005	
19,773.90	6,851.02	3,400.00	3,400.00	402.22	135.37	-1.15	-481.49	11,451.49	4,066.98	3,904.85	162.13	25.085	

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit 611H - Pilot - Plan #2													Offset Site Error:	0.00 ft
Survey Program: 0-MWD+HDGM													Offset Well Error:	0.00 ft
Reference													Rule Assigned:	
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Distance		Minimum Separation	Separation Factor	Warning	
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	(ft)			
600.00	599.98	600.00	599.98	2.08	2.08	90.00	-0.99	1.43	0.00	-4.15	4.15	0.000 Level 3, CC, SF		
700.00	699.84	700.00	699.84	2.42	2.42	90.00	-3.97	5.74	0.00	-4.83	4.83	0.000 Level 3		
800.00	799.45	800.00	799.45	2.77	2.77	90.00	-8.94	12.90	0.00	-5.53	5.53	0.000 Level 3		
900.00	898.70	900.00	898.70	3.13	3.13	90.00	-15.88	22.92	0.00	-6.26	6.26	0.000 Level 3		
906.04	904.68	906.04	904.68	3.15	3.15	90.00	-16.36	23.61	0.00	-6.31	6.31	0.000 Level 3		
963.97	961.95	963.97	961.95	3.37	3.37	89.68	-21.35	30.82	0.00	-6.74	6.74	0.000 Level 3		
967.95	965.87	967.95	965.87	3.39	3.39	68.97	-21.72	31.34	0.00	-6.76	6.76	0.000 Level 3		
1,000.00	997.50	1,000.00	997.50	3.51	3.51	18.21	-24.66	35.59	0.00	-6.89	6.89	0.000 Level 3		
1,022.82	1,020.02	1,022.82	1,020.02	3.60	3.60	12.33	-26.76	38.62	0.00	-7.05	7.05	0.000 Level 3		
1,100.00	1,096.19	1,100.00	1,096.19	3.90	3.90	6.82	-33.84	48.85	0.00	-7.59	7.59	0.000 Level 3		
1,123.16	1,119.05	1,123.16	1,119.05	3.99	3.99	6.20	-35.97	51.92	0.00	-7.76	7.76	0.000 Level 3		
1,200.00	1,194.89	1,200.00	1,194.89	4.30	4.30	5.01	-43.03	62.10	0.00	-8.31	8.31	0.000 Level 3		
1,223.18	1,217.76	1,223.18	1,217.76	4.39	4.39	4.79	-45.16	65.17	0.00	-8.48	8.48	0.000 Level 3		
1,300.00	1,293.58	1,300.00	1,293.58	4.70	4.70	4.27	-52.21	75.36	0.00	-9.04	9.04	0.000 Level 3		
1,323.18	1,316.46	1,323.18	1,316.46	4.80	4.80	4.16	-54.34	78.43	0.00	-9.21	9.21	0.000 Level 3		
1,400.00	1,392.27	1,400.00	1,392.27	5.11	5.11	3.88	-61.40	88.61	0.00	-9.77	9.77	0.000 Level 3		
1,423.18	1,415.15	1,423.18	1,415.15	5.21	5.21	3.81	-63.53	91.68	0.00	-9.94	9.94	0.000 Level 3		
1,500.00	1,490.96	1,500.00	1,490.96	5.52	5.52	3.62	-70.58	101.87	0.01	-10.50	10.50	0.000 Level 3		
1,523.19	1,513.84	1,523.19	1,513.84	5.62	5.62	3.58	-72.71	104.94	0.01	-10.67	10.67	0.000 Level 3		
1,600.00	1,589.65	1,600.00	1,589.65	5.94	5.94	3.45	-79.77	115.12	0.01	-11.23	11.24	0.001 Level 3		
1,623.19	1,612.53	1,623.19	1,612.53	6.04	6.04	3.42	-81.90	118.19	0.01	-11.41	11.41	0.001 Level 3		
1,700.00	1,688.34	1,700.00	1,688.34	6.36	6.36	3.33	-88.95	128.38	0.01	-11.97	11.98	0.001 Level 3		
1,723.19	1,711.23	1,723.19	1,711.22	6.45	6.45	3.30	-91.08	131.45	0.01	-12.14	12.15	0.001 Level 3		
1,800.00	1,787.03	1,800.00	1,787.03	6.78	6.78	3.23	-98.14	141.63	0.01	-12.71	12.72	0.001 Level 3		
1,823.19	1,809.92	1,823.19	1,809.92	6.87	6.87	3.21	-100.26	144.70	0.01	-12.88	12.89	0.001 Level 3		
1,900.00	1,885.73	1,900.00	1,885.72	7.20	7.20	3.16	-107.32	154.89	0.01	-13.45	13.46	0.001 Level 3		
1,923.19	1,908.61	1,923.19	1,908.61	7.29	7.29	3.14	-109.45	157.96	0.01	-13.62	13.63	0.001 Level 3		
2,000.00	1,984.42	2,000.00	1,984.41	7.62	7.62	3.10	-116.50	168.14	0.01	-14.19	14.20	0.001 Level 3		
2,023.19	2,007.30	2,023.19	2,007.30	7.72	7.72	3.08	-118.63	171.21	0.01	-14.36	14.37	0.001 Level 3		
2,100.00	2,083.11	2,100.00	2,083.11	8.04	8.04	3.05	-125.69	181.40	0.01	-14.93	14.95	0.001 Level 3		
2,123.19	2,105.99	2,123.19	2,105.99	8.14	8.14	3.04	-127.82	184.47	0.01	-15.11	15.12	0.001 Level 3		
2,200.00	2,181.80	2,200.00	2,181.80	8.46	8.46	3.01	-134.87	194.65	0.01	-15.68	15.69	0.001 Level 3		
2,223.19	2,204.68	2,223.19	2,204.68	8.56	8.56	3.00	-137.00	197.72	0.01	-15.85	15.86	0.001 Level 3		
2,300.00	2,280.49	2,300.00	2,280.49	8.89	8.89	2.97	-144.06	207.91	0.01	-16.42	16.43	0.001 Level 3		
2,323.19	2,303.37	2,323.19	2,303.37	8.99	8.99	2.96	-146.19	210.98	0.01	-16.59	16.61	0.001 Level 3		
2,400.00	2,379.18	2,400.00	2,379.18	9.31	9.31	2.94	-153.24	221.16	0.01	-17.17	17.18	0.001 Level 3		
2,423.19	2,402.07	2,423.19	2,402.06	9.41	9.41	2.93	-155.37	224.23	0.01	-17.34	17.35	0.001 Level 3		
2,500.00	2,477.87	2,500.00	2,477.87	9.74	9.74	2.91	-162.43	234.41	0.01	-17.91	17.93	0.001 Level 3		
2,523.19	2,500.76	2,523.19	2,500.75	9.84	9.84	2.91	-164.56	237.49	0.01	-18.08	18.10	0.001 Level 3		
2,600.00	2,576.56	2,600.00	2,576.56	10.16	10.16	2.89	-171.61	247.67	0.02	-18.66	18.67	0.001 Level 3		
2,623.19	2,599.45	2,623.19	2,599.45	10.26	10.26	2.88	-173.74	250.74	0.02	-18.83	18.85	0.001 Level 3		
2,700.00	2,675.26	2,700.00	2,675.25	10.59	10.59	2.87	-180.79	260.92	0.02	-19.40	19.42	0.001 Level 3		
2,723.19	2,698.14	2,723.19	2,698.14	10.69	10.69	2.86	-182.92	264.00	0.02	-19.58	19.59	0.001 Level 3		
2,800.00	2,773.95	2,800.00	2,773.94	11.02	11.02	2.85	-189.98	274.18	0.02	-20.15	20.17	0.001 Level 3		
2,823.19	2,796.83	2,823.19	2,796.83	11.12	11.12	2.85	-192.11	277.25	0.02	-20.32	20.34	0.001 Level 3		
2,900.00	2,872.64	2,900.00	2,872.64	11.44	11.44	2.83	-199.16	287.43	0.02	-20.90	20.92	0.001 Level 3		
2,923.19	2,895.52	2,923.19	2,895.52	11.54	11.54	2.83	-201.29	290.51	0.02	-21.07	21.09	0.001 Level 3		
3,000.00	2,971.33	3,000.00	2,971.33	11.87	11.87	2.82	-208.35	300.69	0.02	-21.64	21.66	0.001 Level 3		
3,023.19	2,994.21	3,023.19	2,994.21	11.97	11.97	2.82	-210.48	303.76	0.02	-21.82	21.84	0.001 Level 3		
3,100.00	3,070.02	3,100.00	3,070.02	12.30	12.30	2.80	-217.53	313.94	0.02	-22.39	22.41	0.001 Level 3		
3,123.19	3,092.91	3,123.19	3,092.90	12.40	12.40	2.80	-219.66	317.02	0.02	-22.57	22.59	0.001 Level 3		
3,200.00	3,168.71	3,200.00	3,168.71	12.73	12.73	2.79	-226.72	327.20	0.02	-23.14	23.16	0.001 Level 3		

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit 611H - Pilot - Plan #2													Offset Site Error:	0.00 ft
Survey Program:		0-MWD+HDGM						Rule Assigned:				Offset Well Error:	0.00 ft	
Reference	Offset	Semi Major Axis		Offset Wellbore Centre		Distance		Minimum Separation		Warning				
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Separation Factor	Warning		
3,223.19	3,191.60	3,223.19	3,191.59	12.83	12.83	2.79	-228.85	330.27	0.02	-23.31	23.34	0.001 Level 3		
3,300.00	3,267.40	3,300.00	3,267.40	13.16	13.16	2.78	-235.90	340.45	0.02	-23.89	23.91	0.001 Level 3		
3,323.19	3,290.29	3,323.19	3,290.28	13.25	13.26	2.78	-238.03	343.53	0.02	-24.06	24.08	0.001 Level 3		
3,400.00	3,366.10	3,400.00	3,366.09	13.58	13.58	2.77	-245.08	353.71	0.02	-24.64	24.66	0.001 Level 3		
3,423.19	3,388.98	3,423.19	3,388.98	13.68	13.68	2.77	-247.21	356.78	0.02	-24.81	24.83	0.001 Level 3		
3,500.00	3,464.79	3,500.00	3,464.78	14.01	14.01	2.76	-254.27	366.96	0.02	-25.38	25.41	0.001 Level 3		
3,523.19	3,487.67	3,523.19	3,487.67	14.11	14.11	2.76	-256.40	370.04	0.02	-25.56	25.58	0.001 Level 3		
3,600.00	3,563.48	3,600.00	3,563.47	14.44	14.44	2.75	-263.45	380.22	0.03	-26.13	26.16	0.001 Level 3		
3,623.19	3,586.36	3,623.19	3,586.36	14.54	14.54	2.75	-265.58	383.29	0.03	-26.31	26.33	0.001 Level 3		
3,700.00	3,662.17	3,700.00	3,662.17	14.87	14.87	2.74	-272.64	393.47	0.03	-26.88	26.91	0.001 Level 3		
3,723.19	3,685.05	3,723.19	3,685.05	14.97	14.97	2.74	-274.77	396.55	0.03	-27.06	27.08	0.001 Level 3		
3,800.00	3,760.86	3,800.00	3,760.86	15.30	15.30	2.74	-281.82	406.73	0.03	-27.63	27.66	0.001 Level 3		
3,823.19	3,783.74	3,823.19	3,783.74	15.40	15.40	2.74	-283.95	409.80	0.03	-27.80	27.83	0.001 Level 3		
3,900.00	3,859.55	3,900.00	3,859.55	15.73	15.73	2.73	-291.01	419.98	0.03	-28.38	28.41	0.001 Level 3		
3,923.19	3,882.44	3,923.19	3,882.43	15.83	15.83	2.73	-293.14	423.06	0.03	-28.55	28.58	0.001 Level 3		
4,000.00	3,958.24	4,000.00	3,958.24	16.16	16.16	2.72	-300.19	433.24	0.03	-29.13	29.16	0.001 Level 3		
4,023.19	3,981.13	4,023.19	3,981.12	16.26	16.26	2.72	-302.32	436.31	0.03	-29.30	29.33	0.001 Level 3		
4,100.00	4,056.94	4,100.00	4,056.93	16.59	16.59	2.72	-309.37	446.49	0.03	-29.88	29.91	0.001 Level 3		
4,123.19	4,079.82	4,123.19	4,079.81	16.69	16.69	2.72	-311.50	449.57	0.03	-30.05	30.08	0.001 Level 3		
4,200.00	4,155.63	4,200.00	4,155.62	17.02	17.02	2.71	-318.56	459.75	0.03	-30.63	30.66	0.001 Level 3		
4,223.19	4,178.51	4,223.19	4,178.51	17.12	17.12	2.71	-320.69	462.82	0.03	-30.80	30.83	0.001 Level 3		
4,300.00	4,254.32	4,300.00	4,254.31	17.45	17.45	2.71	-327.74	473.00	0.03	-31.38	31.41	0.001 Level 3		
4,323.19	4,277.20	4,323.19	4,277.20	17.55	17.55	2.70	-329.87	476.08	0.03	-31.55	31.58	0.001 Level 3		
4,400.00	4,353.01	4,400.00	4,353.00	17.88	17.88	2.70	-336.93	486.26	0.03	-32.13	32.16	0.001 Level 3		
4,423.19	4,375.89	4,423.19	4,375.89	17.97	17.98	2.70	-339.06	489.33	0.03	-32.30	32.33	0.001 Level 3		
4,500.00	4,451.70	4,500.00	4,451.70	18.30	18.31	2.70	-346.11	499.51	0.03	-32.88	32.91	0.001 Level 3		
4,523.19	4,474.58	4,523.19	4,474.58	18.40	18.40	2.70	-348.24	502.59	0.03	-33.05	33.08	0.001 Level 3		
4,600.00	4,550.39	4,600.00	4,550.39	18.73	18.73	2.69	-355.30	512.77	0.03	-33.63	33.66	0.001 Level 3		
4,623.19	4,573.28	4,623.19	4,573.27	18.83	18.83	2.69	-357.43	515.84	0.03	-33.80	33.84	0.001 Level 3		
4,700.00	4,649.08	4,700.00	4,649.08	19.16	19.16	2.69	-364.48	526.02	0.04	-34.38	34.41	0.001 Level 3		
4,723.19	4,671.97	4,723.19	4,671.96	19.26	19.26	2.69	-366.61	529.10	0.04	-34.55	34.59	0.001 Level 3		
4,800.00	4,747.77	4,800.00	4,747.77	19.59	19.59	2.68	-373.67	539.28	0.04	-35.13	35.16	0.001 Level 3		
4,823.19	4,770.66	4,823.19	4,770.65	19.69	19.69	2.68	-375.79	542.35	0.04	-35.30	35.34	0.001 Level 3		
4,900.00	4,846.47	4,900.00	4,846.46	20.02	20.02	2.68	-382.85	552.53	0.04	-35.88	35.91	0.001 Level 3		
4,923.19	4,869.35	4,923.19	4,869.34	20.12	20.12	2.68	-384.98	555.61	0.04	-36.05	36.09	0.001 Level 3		
5,000.00	4,945.16	5,000.00	4,945.15	20.45	20.45	2.68	-392.03	565.79	0.04	-36.63	36.66	0.001 Level 3		
5,023.19	4,968.04	5,023.19	4,968.03	20.55	20.55	2.67	-394.16	568.86	0.04	-36.80	36.84	0.001 Level 3		
5,100.00	5,043.85	5,100.00	5,043.84	20.88	20.88	2.67	-401.22	579.04	0.04	-37.38	37.42	0.001 Level 3		
5,123.19	5,066.73	5,123.19	5,066.73	20.98	20.98	2.67	-403.35	582.12	0.04	-37.55	37.59	0.001 Level 3		
5,200.00	5,142.54	5,200.00	5,142.53	21.31	21.31	2.67	-410.40	592.30	0.04	-38.13	38.17	0.001 Level 3		
5,223.19	5,165.42	5,223.19	5,165.42	21.41	21.41	2.67	-412.53	595.37	0.04	-38.30	38.34	0.001 Level 3		
5,300.00	5,241.23	5,300.00	5,241.22	21.74	21.75	2.67	-419.59	605.55	0.04	-38.88	38.92	0.001 Level 3		
5,323.19	5,264.12	5,323.19	5,264.11	21.84	21.84	2.66	-421.72	608.63	0.04	-39.05	39.09	0.001 Level 3		
5,400.00	5,339.92	5,400.00	5,339.92	22.17	22.18	2.66	-428.77	618.81	0.04	-39.63	39.67	0.001 Level 3		
5,423.19	5,362.81	5,423.19	5,362.80	22.27	22.27	2.66	-430.90	621.88	0.04	-39.80	39.84	0.001 Level 3		
5,500.00	5,438.61	5,500.00	5,438.61	22.61	22.61	2.66	-437.96	632.06	0.04	-40.38	40.42	0.001 Level 3		
5,523.19	5,461.50	5,523.19	5,461.49	22.70	22.71	2.66	-440.09	635.14	0.04	-40.55	40.59	0.001 Level 3		
5,600.00	5,537.31	5,600.00	5,537.30	23.04	23.04	2.66	-447.14	645.32	0.04	-41.13	41.17	0.001 Level 3		
5,623.19	5,560.19	5,623.19	5,560.18	23.14	23.14	2.66	-449.27	648.39	0.04	-41.30	41.35	0.001 Level 3		
5,700.00	5,636.00	5,700.00	5,635.99	23.47	23.47	2.65	-456.32	658.57	0.05	-41.88	41.92	0.001 Level 3		
5,723.19	5,658.88	5,723.19	5,658.87	23.57	23.57	2.65	-458.45	661.65	0.05	-42.05	42.10	0.001 Level 3		
5,800.00	5,734.69	5,800.00	5,734.68	23.90	23.90	2.65	-465.51	671.83	0.05	-42.63	42.67	0.001 Level 3		

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit 611H - Pilot - Plan #2													Offset Site Error:	0.00 ft
Survey Program: 0-MWD+HDGM													Offset Well Error:	0.00 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
5,823.19	5,757.57	5,823.19	5,757.56	24.00	24.00	2.65	-467.64	674.90	0.05	-42.80	42.85	0.001	Level 3	
5,900.00	5,833.38	5,900.00	5,833.37	24.33	24.33	2.65	-474.69	685.08	0.05	-43.38	43.43	0.001	Level 3	
5,923.19	5,856.26	5,923.19	5,856.26	24.43	24.43	2.65	-476.82	688.16	0.05	-43.55	43.60	0.001	Level 3	
6,000.00	5,932.07	6,000.00	5,932.06	24.76	24.76	2.65	-483.88	698.34	0.05	-44.13	44.18	0.001	Level 3	
6,023.19	5,954.95	6,023.19	5,954.95	24.86	24.86	2.65	-486.01	701.41	0.05	-44.30	44.35	0.001	Level 3	
6,100.00	6,030.76	6,100.00	6,030.75	25.19	25.19	2.64	-493.06	711.59	0.05	-44.88	44.93	0.001	Level 3	
6,123.19	6,053.65	6,123.19	6,053.64	25.29	25.29	2.64	-495.19	714.67	0.05	-45.05	45.10	0.001	Level 3	
6,200.00	6,129.45	6,200.00	6,129.45	25.62	25.62	2.64	-502.25	724.85	0.05	-45.63	45.68	0.001	Level 3	
6,223.19	6,152.34	6,223.19	6,152.33	25.72	25.72	2.64	-504.38	727.92	0.05	-45.80	45.85	0.001	Level 3	
6,300.00	6,228.15	6,300.00	6,228.14	26.05	26.05	2.64	-511.43	738.10	0.05	-46.38	46.43	0.001	Level 3	
6,316.45	6,244.38	6,316.45	6,244.37	26.12	26.12	2.64	-512.94	740.28	0.05	-46.50	46.55	0.001	Level 3	
6,370.81	6,298.03	6,370.81	6,298.02	26.35	26.35	2.64	-517.93	747.49	0.05	-46.91	46.96	0.001	Level 3	
6,400.00	6,326.74	6,399.99	6,326.82	26.48	26.48	149.39	-520.61	751.36	0.63	-49.08	49.71	0.013	Level 3, ES	
6,450.00	6,375.33	6,449.74	6,375.96	26.73	26.69	161.19	-525.04	757.74	5.09	-44.60	49.69	0.103	Level 3	
6,500.00	6,422.93	6,498.76	6,424.50	26.99	26.89	167.27	-528.93	763.36	14.14	-35.78	49.92	0.283	Level 3	
6,550.00	6,469.25	6,546.58	6,471.95	27.29	27.08	170.90	-532.27	768.18	27.71	-22.50	50.22	0.552	Level 3	
6,600.00	6,513.99	6,592.72	6,517.84	27.61	27.26	173.35	-535.07	772.21	45.66	-4.87	50.53	0.904	Level 3	
6,650.00	6,556.88	6,636.78	6,561.72	27.96	27.43	175.13	-537.34	775.50	67.82	16.97	50.84	1.334	Level 3	
6,700.00	6,597.66	6,678.39	6,603.20	28.34	27.58	176.51	-539.14	778.09	93.95	42.82	51.14	1.837		
6,750.00	6,636.07	6,717.20	6,641.93	28.76	27.72	177.64	-540.51	780.07	123.83	72.41	51.41	2.409		
6,800.00	6,671.88	6,752.94	6,677.64	29.21	27.84	178.62	-541.50	781.50	157.15	105.49	51.66	3.042		
6,850.00	6,704.87	6,785.40	6,710.08	29.71	27.95	179.52	-542.18	782.49	193.64	141.75	51.89	3.732		
6,900.00	6,734.84	6,814.41	6,739.07	30.25	28.04	-179.58	-542.62	783.11	232.97	180.88	52.09	4.472		
6,950.00	6,761.59	6,839.83	6,764.49	30.85	28.12	-178.63	-542.86	783.46	274.80	222.54	52.26	5.258		
7,000.00	6,784.97	6,861.59	6,786.25	31.50	28.19	-177.52	-542.96	783.61	318.81	266.40	52.41	6.083		
7,050.00	6,804.83	6,880.17	6,804.83	32.20	28.24	-176.10	-542.98	783.64	364.64	312.09	52.55	6.939		
7,100.00	6,821.05	6,896.39	6,821.05	32.96	28.29	-174.14	-542.98	783.64	411.91	359.23	52.68	7.819		
7,150.00	6,833.53	6,908.87	6,833.53	33.77	28.33	-170.93	-542.98	783.64	460.29	407.50	52.79	8.719		
7,200.00	6,842.18	6,917.53	6,842.18	34.62	28.35	-164.36	-542.98	783.64	509.49	456.61	52.87	9.636		
7,250.00	6,846.97	6,922.31	6,846.97	35.52	28.36	-143.90	-542.98	783.64	559.21	506.28	52.93	10.565		
7,286.15	6,848.00	6,923.34	6,848.00	36.18	28.37	-90.32	-542.98	783.64	595.31	542.35	52.96	11.241		
7,300.00	6,848.00	6,923.35	6,848.00	36.44	28.37	-90.32	-542.98	783.64	609.14	556.18	52.97	11.500		
7,400.00	6,848.03	6,923.37	6,848.03	38.40	28.37	-90.38	-542.98	783.64	709.06	656.05	53.02	13.374		
7,500.00	6,848.05	6,923.39	6,848.05	40.49	28.37	-90.43	-542.98	783.64	809.00	755.95	53.06	15.248		
7,600.00	6,848.08	6,923.42	6,848.08	42.70	28.37	-90.48	-542.98	783.64	908.96	855.86	53.09	17.120		
7,700.00	6,848.10	6,923.44	6,848.10	45.01	28.37	-90.53	-542.98	783.64	1,008.92	955.79	53.13	18.990		
7,800.00	6,848.12	6,923.47	6,848.12	47.40	28.37	-90.59	-542.98	783.64	1,108.89	1,055.73	53.16	20.860		
7,900.00	6,848.15	6,923.49	6,848.15	49.86	28.37	-90.64	-542.98	783.64	1,208.86	1,155.67	53.19	22.728		
8,000.00	6,848.17	6,923.52	6,848.17	52.39	28.37	-90.69	-542.98	783.64	1,308.84	1,255.62	53.22	24.594		
8,100.00	6,848.20	6,923.54	6,848.20	54.96	28.37	-90.75	-542.98	783.64	1,408.82	1,355.58	53.25	26.459		
8,200.00	6,848.22	6,923.56	6,848.22	57.58	28.37	-90.80	-542.98	783.64	1,508.81	1,455.53	53.27	28.321		
8,300.00	6,848.25	6,923.59	6,848.25	60.24	28.37	-90.85	-542.98	783.64	1,608.79	1,555.49	53.30	30.182		
8,400.00	6,848.27	6,923.61	6,848.27	62.94	28.37	-90.91	-542.98	783.64	1,708.78	1,655.45	53.33	32.041		
8,500.00	6,848.29	6,923.64	6,848.29	65.66	28.37	-90.96	-542.98	783.64	1,808.77	1,755.41	53.36	33.898		
8,600.00	6,848.32	6,923.66	6,848.32	68.42	28.37	-91.01	-542.98	783.64	1,908.76	1,855.37	53.39	35.752		
8,700.00	6,848.34	6,923.68	6,848.34	71.19	28.37	-91.07	-542.98	783.64	2,008.75	1,955.33	53.42	37.605		
8,800.00	6,848.37	6,923.71	6,848.37	73.99	28.37	-91.12	-542.98	783.64	2,108.74	2,055.29	53.45	39.455		
8,900.00	6,848.39	6,923.73	6,848.39	76.80	28.37	-91.17	-542.98	783.64	2,208.73	2,155.26	53.48	41.302		
9,000.00	6,848.42	6,923.76	6,848.42	79.63	28.37	-91.22	-542.98	783.64	2,308.73	2,255.22	53.51	43.147		
9,100.00	6,848.44	6,923.78	6,848.44	82.47	28.37	-91.28	-542.98	783.64	2,408.72	2,355.18	53.54	44.990		
9,200.00	6,848.46	6,923.81	6,848.46	85.33	28.37	-91.33	-542.98	783.64	2,508.72	2,455.14	53.57	46.829		
9,300.00	6,848.49	6,923.83	6,848.49	88.20	28.37	-91.38	-542.98	783.64	2,608.71	2,555.11	53.60	48.666		

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit 611H - Pilot - Plan #2												Offset Site Error:	0.00 ft
Survey Program: 0-MWD+HDGM												Offset Well Error:	0.00 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
9,400.00	6,848.51	6,923.85	6,848.51	91.08	28.37	-91.44	-542.98	783.64	2,708.71	2,655.07	53.64	50.501	
9,500.00	6,848.54	6,923.88	6,848.54	93.97	28.37	-91.49	-542.98	783.64	2,808.70	2,755.03	53.67	52.332	
9,600.00	6,848.56	6,923.90	6,848.56	96.87	28.37	-91.54	-542.98	783.64	2,908.70	2,854.99	53.71	54.160	
9,700.00	6,848.58	6,923.93	6,848.58	99.77	28.37	-91.60	-542.98	783.64	3,008.69	2,954.95	53.74	55.985	
9,800.00	6,848.61	6,923.95	6,848.61	102.69	28.37	-91.65	-542.98	783.64	3,108.69	3,054.91	53.78	57.807	
9,900.00	6,848.63	6,923.98	6,848.63	105.61	28.37	-91.70	-542.98	783.64	3,208.69	3,154.87	53.81	59.626	
10,000.00	6,848.66	6,924.00	6,848.66	108.53	28.37	-91.75	-542.98	783.64	3,308.68	3,254.83	53.85	61.442	
10,100.00	6,848.68	6,924.02	6,848.68	111.46	28.37	-91.81	-542.98	783.64	3,408.68	3,354.79	53.89	63.254	
10,200.00	6,848.71	6,924.05	6,848.71	114.40	28.37	-91.86	-542.98	783.64	3,508.68	3,454.75	53.93	65.063	
10,300.00	6,848.73	6,924.07	6,848.73	117.34	28.37	-91.91	-542.98	783.64	3,608.67	3,554.71	53.97	66.868	
10,400.00	6,848.75	6,924.10	6,848.75	120.29	28.37	-91.97	-542.98	783.64	3,708.67	3,654.66	54.01	68.670	
10,500.00	6,848.78	6,924.12	6,848.78	123.24	28.37	-92.02	-542.98	783.64	3,808.67	3,754.62	54.05	70.468	
10,600.00	6,848.80	6,924.15	6,848.80	126.20	28.37	-92.07	-542.98	783.64	3,908.67	3,854.58	54.09	72.262	
10,700.00	6,848.83	6,924.17	6,848.83	129.16	28.37	-92.12	-542.98	783.64	4,008.66	3,954.53	54.13	74.053	
10,800.00	6,848.85	6,924.19	6,848.85	132.12	28.37	-92.18	-542.98	783.64	4,108.66	4,054.49	54.18	75.840	
10,900.00	6,848.88	6,924.22	6,848.88	135.08	28.37	-92.23	-542.98	783.64	4,208.66	4,154.44	54.22	77.622	
11,000.00	6,848.90	6,924.24	6,848.90	138.05	28.37	-92.28	-542.98	783.64	4,308.66	4,254.39	54.26	79.401	
11,100.00	6,848.92	6,924.27	6,848.92	141.02	28.37	-92.34	-542.98	783.64	4,408.66	4,354.35	54.31	81.176	
11,200.00	6,848.95	6,924.29	6,848.95	144.00	28.37	-92.39	-542.98	783.64	4,508.66	4,454.30	54.36	82.947	
11,300.00	6,848.97	6,924.31	6,848.97	146.97	28.37	-92.44	-542.98	783.64	4,608.65	4,554.25	54.40	84.714	
11,400.00	6,849.00	6,924.34	6,849.00	149.95	28.37	-92.50	-542.98	783.64	4,708.65	4,654.20	54.45	86.476	
11,500.00	6,849.02	6,924.36	6,849.02	152.93	28.37	-92.55	-542.98	783.64	4,808.65	4,754.15	54.50	88.234	
11,600.00	6,849.04	6,924.39	6,849.04	155.91	28.37	-92.60	-542.98	783.64	4,908.65	4,854.10	54.55	89.988	
11,700.00	6,849.07	6,924.41	6,849.07	158.90	28.37	-92.65	-542.98	783.64	5,008.65	4,954.05	54.60	91.738	
11,800.00	6,849.09	6,924.44	6,849.09	161.88	28.37	-92.71	-542.98	783.64	5,108.65	5,054.00	54.65	93.483	
11,900.00	6,849.12	6,924.46	6,849.12	164.87	28.37	-92.76	-542.98	783.64	5,208.65	5,153.95	54.70	95.224	
12,000.00	6,849.14	6,924.48	6,849.14	167.86	28.37	-92.81	-542.98	783.64	5,308.64	5,253.89	54.75	96.960	
12,100.00	6,849.17	6,924.51	6,849.17	170.85	28.37	-92.87	-542.98	783.64	5,408.64	5,353.84	54.80	98.691	
12,200.00	6,849.19	6,924.53	6,849.19	173.84	28.37	-92.92	-542.98	783.64	5,508.64	5,453.78	54.86	100.418	
12,300.00	6,849.21	6,924.56	6,849.21	176.84	28.37	-92.97	-542.98	783.64	5,608.64	5,553.73	54.91	102.141	
12,400.00	6,849.24	6,924.58	6,849.24	179.83	28.37	-93.02	-542.98	783.64	5,708.64	5,653.67	54.97	103.858	
12,500.00	6,849.26	6,924.61	6,849.26	182.83	28.37	-93.08	-542.98	783.64	5,808.64	5,753.62	55.02	105.571	
12,600.00	6,849.29	6,924.63	6,849.29	185.82	28.37	-93.13	-542.98	783.64	5,908.64	5,853.56	55.08	107.279	
12,700.00	6,849.31	6,924.65	6,849.31	188.82	28.37	-93.18	-542.98	783.64	6,008.64	5,953.50	55.13	108.982	
12,800.00	6,849.34	6,924.68	6,849.34	191.82	28.37	-93.24	-542.98	783.64	6,108.64	6,053.44	55.19	110.680	
12,900.00	6,849.36	6,924.70	6,849.36	194.82	28.37	-93.29	-542.98	783.64	6,208.63	6,153.38	55.25	112.374	
13,000.00	6,849.38	6,924.73	6,849.38	197.82	28.37	-93.34	-542.98	783.64	6,308.63	6,253.33	55.31	114.062	
13,100.00	6,849.41	6,924.75	6,849.41	200.83	28.37	-93.39	-542.98	783.64	6,408.63	6,353.26	55.37	115.746	
13,200.00	6,849.43	6,924.77	6,849.43	203.83	28.37	-93.45	-542.98	783.64	6,508.63	6,453.20	55.43	117.424	
13,300.00	6,849.46	6,924.80	6,849.46	206.83	28.37	-93.50	-542.98	783.64	6,608.63	6,553.14	55.49	119.097	
13,400.00	6,849.48	6,924.82	6,849.48	209.84	28.37	-93.55	-542.98	783.64	6,708.63	6,653.08	55.55	120.765	
13,500.00	6,849.50	6,924.85	6,849.50	212.84	28.37	-93.61	-542.98	783.64	6,808.63	6,753.02	55.61	122.428	
13,600.00	6,849.53	6,924.87	6,849.53	215.85	28.37	-93.66	-542.98	783.64	6,908.63	6,852.95	55.68	124.086	
13,700.00	6,849.55	6,924.90	6,849.55	218.86	28.37	-93.71	-542.98	783.64	7,008.63	6,952.89	55.74	125.738	
13,800.00	6,849.58	6,924.92	6,849.58	221.87	28.37	-93.76	-542.98	783.64	7,108.63	7,052.82	55.80	127.386	
13,900.00	6,849.60	6,924.94	6,849.60	224.87	28.37	-93.82	-542.98	783.64	7,208.63	7,152.76	55.87	129.028	
14,000.00	6,849.63	6,924.97	6,849.63	227.88	28.37	-93.87	-542.98	783.64	7,308.63	7,252.69	55.93	130.664	
14,100.00	6,849.65	6,924.99	6,849.65	230.89	28.37	-93.92	-542.98	783.64	7,408.63	7,352.63	56.00	132.296	
14,200.00	6,849.67	6,925.02	6,849.67	233.90	28.37	-93.98	-542.98	783.64	7,508.63	7,452.56	56.07	133.922	
14,300.00	6,849.70	6,925.04	6,849.70	236.92	28.37	-94.03	-542.98	783.64	7,608.62	7,552.49	56.13	135.542	
14,400.00	6,849.72	6,925.07	6,849.72	239.93	28.37	-94.08	-542.98	783.64	7,708.62	7,652.42	56.20	137.157	
14,500.00	6,849.75	6,925.09	6,849.75	242.94	28.37	-94.13	-542.98	783.64	7,808.62	7,752.35	56.27	138.767	

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit 611H - Pilot - Plan #2													Offset Site Error:	0.00 ft
Survey Program: 0-MWD+HDGM													Offset Well Error:	0.00 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Distance Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
14,600.00	6,849.77	6,925.11	6,849.77	245.95	28.37	-94.19	-542.98	783.64	7,908.62	7,852.28	56.34	140.371		
14,700.00	6,849.80	6,925.14	6,849.80	248.96	28.37	-94.24	-542.98	783.64	8,008.62	7,952.21	56.41	141.970		
14,800.00	6,849.82	6,925.16	6,849.82	251.98	28.37	-94.29	-542.98	783.64	8,108.62	8,052.14	56.48	143.563		
14,900.00	6,849.84	6,925.19	6,849.84	254.99	28.37	-94.34	-542.98	783.64	8,208.62	8,152.07	56.55	145.151		
15,000.00	6,849.87	6,925.21	6,849.87	258.01	28.37	-94.40	-542.98	783.64	8,308.62	8,252.00	56.62	146.733		
15,100.00	6,849.89	6,925.23	6,849.89	261.02	28.37	-94.45	-542.98	783.64	8,408.62	8,351.92	56.70	148.309		
15,200.00	6,849.92	6,925.26	6,849.92	264.04	28.37	-94.50	-542.98	783.64	8,508.62	8,451.85	56.77	149.880		
15,300.00	6,849.94	6,925.28	6,849.94	267.05	28.37	-94.56	-542.98	783.64	8,608.62	8,551.78	56.84	151.446		
15,400.00	6,849.97	6,925.31	6,849.97	270.07	28.37	-94.61	-542.98	783.64	8,708.62	8,651.70	56.92	153.005		
15,500.00	6,849.99	6,925.33	6,849.99	273.08	28.37	-94.66	-542.98	783.64	8,808.62	8,751.63	56.99	154.559		
15,600.00	6,850.01	6,925.36	6,850.01	276.10	28.37	-94.71	-542.98	783.64	8,908.62	8,851.55	57.07	156.108		
15,700.00	6,850.04	6,925.38	6,850.04	279.12	28.37	-94.77	-542.98	783.64	9,008.62	8,951.47	57.14	157.651		
15,800.00	6,850.06	6,925.40	6,850.06	282.14	28.37	-94.82	-542.98	783.64	9,108.62	9,051.40	57.22	159.188		
15,900.00	6,850.09	6,925.43	6,850.09	285.15	28.37	-94.87	-542.98	783.64	9,208.62	9,151.32	57.30	160.719		
16,000.00	6,850.11	6,925.45	6,850.11	288.17	28.37	-94.92	-542.98	783.64	9,308.62	9,251.24	57.37	162.245		
16,100.00	6,850.13	6,925.48	6,850.13	291.19	28.37	-94.98	-542.98	783.64	9,408.62	9,351.16	57.45	163.765		
16,200.00	6,850.16	6,925.50	6,850.16	294.21	28.37	-95.03	-542.98	783.64	9,508.62	9,451.08	57.53	165.279		
16,300.00	6,850.18	6,925.53	6,850.18	297.23	28.37	-95.08	-542.98	783.64	9,608.62	9,551.01	57.61	166.787		
16,400.00	6,850.21	6,925.55	6,850.21	300.25	28.37	-95.13	-542.98	783.64	9,708.61	9,650.93	57.69	168.290		
16,500.00	6,850.23	6,925.57	6,850.23	303.27	28.37	-95.19	-542.98	783.64	9,808.61	9,750.84	57.77	169.787		
16,600.00	6,850.26	6,925.60	6,850.26	306.28	28.37	-95.24	-542.98	783.64	9,908.61	9,850.76	57.85	171.278		
16,700.00	6,850.28	6,925.62	6,850.28	309.30	28.37	-95.29	-542.98	783.64	10,008.61	9,950.68	57.93	172.764		
16,800.00	6,850.30	6,925.65	6,850.30	312.32	28.37	-95.35	-542.98	783.64	10,108.61	10,050.60	58.01	174.244		
16,900.00	6,850.33	6,925.67	6,850.33	315.35	28.37	-95.40	-542.98	783.64	10,208.61	10,150.52	58.10	175.718		
17,000.00	6,850.35	6,925.69	6,850.35	318.37	28.37	-95.45	-542.98	783.64	10,308.61	10,250.43	58.18	177.186		
17,100.00	6,850.38	6,925.72	6,850.38	321.39	28.37	-95.50	-542.98	783.64	10,408.61	10,350.35	58.26	178.648		
17,200.00	6,850.40	6,925.74	6,850.40	324.41	28.37	-95.56	-542.98	783.64	10,508.61	10,450.26	58.35	180.105		
17,300.00	6,850.43	6,925.77	6,850.43	327.43	28.37	-95.61	-542.98	783.64	10,608.61	10,550.18	58.43	181.556		
17,400.00	6,850.45	6,925.79	6,850.45	330.45	28.37	-95.66	-542.98	783.64	10,708.61	10,650.09	58.52	183.001		
17,500.00	6,850.47	6,925.82	6,850.47	333.47	28.37	-95.71	-542.98	783.64	10,808.61	10,750.01	58.60	184.440		
17,600.00	6,850.50	6,925.84	6,850.50	336.49	28.37	-95.77	-542.98	783.64	10,908.61	10,849.92	58.69	185.874		
17,700.00	6,850.52	6,925.86	6,850.52	339.52	28.37	-95.82	-542.98	783.64	11,008.61	10,949.84	58.77	187.301		
17,800.00	6,850.55	6,925.89	6,850.55	342.54	28.37	-95.87	-542.98	783.64	11,108.61	11,049.75	58.86	188.723		
17,900.00	6,850.57	6,925.91	6,850.57	345.56	28.37	-95.92	-542.98	783.64	11,208.61	11,149.66	58.95	190.140		
18,000.00	6,850.59	6,925.94	6,850.59	348.58	28.37	-95.98	-542.98	783.64	11,308.61	11,249.57	59.04	191.550		
18,100.00	6,850.62	6,925.96	6,850.62	351.61	28.37	-96.03	-542.98	783.64	11,408.61	11,349.48	59.13	192.955		
18,200.00	6,850.64	6,925.99	6,850.64	354.63	28.37	-96.08	-542.98	783.64	11,508.61	11,449.39	59.21	194.354		
18,300.00	6,850.67	6,926.01	6,850.67	357.65	28.37	-96.13	-542.98	783.64	11,608.61	11,549.30	59.30	195.747		
18,400.00	6,850.69	6,926.03	6,850.69	360.67	28.37	-96.18	-542.98	783.64	11,708.61	11,649.21	59.39	197.134		
18,500.00	6,850.72	6,926.06	6,850.72	363.70	28.37	-96.24	-542.98	783.64	11,808.61	11,749.12	59.48	198.516		
18,600.00	6,850.74	6,926.08	6,850.74	366.72	28.37	-96.29	-542.98	783.64	11,908.61	11,849.03	59.58	199.892		
18,700.00	6,850.76	6,926.11	6,850.76	369.75	28.37	-96.34	-542.98	783.64	12,008.61	11,948.94	59.67	201.262		
18,800.00	6,850.79	6,926.13	6,850.79	372.77	28.38	-96.39	-542.98	783.64	12,108.61	12,048.85	59.76	202.627		
18,900.00	6,850.81	6,926.16	6,850.81	375.79	28.38	-96.45	-542.98	783.64	12,208.61	12,148.76	59.85	203.985		
19,000.00	6,850.84	6,926.18	6,850.84	378.82	28.38	-96.50	-542.98	783.64	12,308.61	12,248.66	59.94	205.339		
19,100.00	6,850.86	6,926.20	6,850.86	381.84	28.38	-96.55	-542.98	783.64	12,408.61	12,348.57	60.04	206.686		
19,200.00	6,850.89	6,926.23	6,850.89	384.87	28.38	-96.60	-542.98	783.64	12,508.61	12,448.48	60.13	208.028		
19,300.00	6,850.91	6,926.25	6,850.91	387.89	28.38	-96.66	-542.98	783.64	12,608.61	12,548.38	60.22	209.364		
19,400.00	6,850.93	6,926.28	6,850.93	390.91	28.38	-96.71	-542.98	783.64	12,708.61	12,648.29	60.32	210.694		
19,500.00	6,850.96	6,926.30	6,850.96	393.94	28.38	-96.76	-542.98	783.64	12,808.61	12,748.19	60.41	212.019		
19,600.00	6,850.98	6,926.32	6,850.98	396.96	28.38	-96.81	-542.98	783.64	12,908.61	12,848.10	60.51	213.338		
19,673.90	6,851.00	6,926.34	6,851.00	399.20	28.38	-96.85	-542.98	783.64	12,982.51	12,921.93	60.58	214.309		

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit 611H - Pilot - Plan #2												Offset Site Error: 0.00 ft		
Survey Program: 0-MWD+HDGM												Offset Well Error: 0.00 ft		
Reference		Offset		Semi Major Axis		Offset Wellbore Centre			Rule Assigned: Distance					
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	+N/-S	+E/-W	Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning	
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)			
19,700.00	6,851.01	6,926.35	6,851.01	399.99	28.38	-96.86	-542.98	783.64	13,008.61	12,948.00	60.60	214.652		
19,773.90	6,851.02	6,926.37	6,851.02	402.22	28.38	-96.90	-542.98	783.64	13,082.51	13,021.83	60.67	215.619		



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit Com 138H - Lateral - Lateral													Offset Site Error:	0.00 ft
Survey Program: 575-MWD+HDGM, 3098-MWD+HDGM													Offset Well Error:	0.00 ft
Reference													Rule Assigned:	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (ft)	Separation Factor	Warning	
							+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
0.00	0.00	6,514.01	2,545.06	0.00	99.58	68.56	3,064.58	7,802.49	8,827.00					
100.00	100.00	6,514.01	2,545.06	0.30	99.58	68.56	3,064.58	7,802.49	8,796.19	8,708.04	88.15	99.790		
200.00	200.00	6,514.01	2,545.06	0.66	99.58	68.56	3,064.58	7,802.49	8,766.41	8,677.83	88.58	98.968		
300.00	300.00	6,514.01	2,545.06	1.01	99.58	68.56	3,064.58	7,802.49	8,737.67	8,648.59	89.08	98.083		
400.00	400.00	6,514.01	2,545.06	1.37	99.58	68.56	3,064.58	7,802.49	8,709.99	8,620.37	89.63	97.182		
500.00	500.00	6,514.01	2,545.06	1.73	99.58	68.56	3,064.58	7,802.49	8,683.37	8,593.19	90.18	96.290		
600.00	599.98	6,514.01	2,545.06	2.08	99.58	-56.62	3,064.58	7,802.49	8,656.89	8,566.15	90.74	95.406		
700.00	699.84	6,514.01	2,545.06	2.42	99.58	-57.09	3,064.58	7,802.49	8,629.63	8,538.33	91.30	94.516		
800.00	799.45	6,514.01	2,545.06	2.77	99.58	-57.58	3,064.58	7,802.49	8,601.62	8,509.73	91.88	93.615		
900.00	898.70	6,514.01	2,545.06	3.13	99.58	-58.09	3,064.58	7,802.49	8,572.88	8,480.40	92.48	92.703		
963.97	961.95	6,514.01	2,545.06	3.37	99.58	-58.43	3,064.58	7,802.49	8,554.13	8,461.26	92.87	92.112		
1,000.00	997.50	6,514.01	2,545.06	3.51	99.58	-58.43	3,064.58	7,802.49	8,543.56	8,450.47	93.09	91.780		
1,100.00	1,096.19	6,514.01	2,545.06	3.90	99.58	-58.43	3,064.58	7,802.49	8,514.95	8,421.25	93.70	90.879		
1,200.00	1,194.89	6,514.01	2,545.06	4.30	99.58	-58.43	3,064.58	7,802.49	8,487.42	8,393.11	94.31	89.999		
1,300.00	1,293.58	6,514.01	2,545.06	4.70	99.58	-58.43	3,064.58	7,802.49	8,460.98	8,366.07	94.91	89.143		
1,400.00	1,392.27	6,514.01	2,545.06	5.11	99.58	-58.43	3,064.58	7,802.49	8,435.65	8,340.13	95.52	88.311		
1,500.00	1,490.96	6,514.01	2,545.06	5.52	99.58	-58.43	3,064.58	7,802.49	8,411.43	8,315.31	96.12	87.506		
1,600.00	1,589.65	6,514.01	2,545.06	5.94	99.58	-58.43	3,064.58	7,802.49	8,388.33	8,291.61	96.72	86.726		
1,700.00	1,688.34	6,514.01	2,545.06	6.36	99.58	-58.43	3,064.58	7,802.49	8,366.37	8,269.05	97.31	85.973		
1,800.00	1,787.03	6,514.01	2,545.06	6.78	99.58	-58.43	3,064.58	7,802.49	8,345.54	8,247.64	97.90	85.246		
1,900.00	1,885.73	6,514.01	2,545.06	7.20	99.58	-58.43	3,064.58	7,802.49	8,325.87	8,227.39	98.48	84.547		
2,000.00	1,984.42	6,514.01	2,545.06	7.62	99.58	-58.43	3,064.58	7,802.49	8,307.35	8,208.30	99.05	83.874		
2,100.00	2,083.11	6,514.01	2,545.06	8.04	99.58	-58.43	3,064.58	7,802.49	8,289.99	8,190.39	99.61	83.228		
2,200.00	2,181.80	6,514.01	2,545.06	8.46	99.58	-58.43	3,064.58	7,802.49	8,273.81	8,173.66	100.16	82.609		
2,300.00	2,280.49	6,514.01	2,545.06	8.89	99.58	-58.43	3,064.58	7,802.49	8,258.81	8,158.11	100.70	82.017		
2,400.00	2,379.18	6,514.01	2,545.06	9.31	99.58	-58.43	3,064.58	7,802.49	8,244.99	8,143.77	101.23	81.451		
2,500.00	2,477.87	6,514.01	2,545.06	9.74	99.58	-58.43	3,064.58	7,802.49	8,232.37	8,130.62	101.74	80.912		
2,600.00	2,576.56	6,514.01	2,545.06	10.16	99.58	-58.43	3,064.58	7,802.49	8,220.94	8,118.69	102.25	80.398		
2,700.00	2,675.26	6,514.01	2,545.06	10.59	99.58	-58.43	3,064.58	7,802.49	8,210.71	8,107.97	102.75	79.911		
2,800.00	2,773.95	6,514.01	2,545.06	11.02	99.58	-58.43	3,064.58	7,802.49	8,201.70	8,098.46	103.23	79.449		
2,900.00	2,872.64	6,514.01	2,545.06	11.44	99.58	-58.43	3,064.58	7,802.49	8,193.89	8,090.18	103.70	79.013		
3,000.00	2,971.33	6,514.01	2,545.06	11.87	99.58	-58.43	3,064.58	7,802.49	8,187.29	8,083.13	104.16	78.602		
3,100.00	3,070.02	6,514.01	2,545.06	12.30	99.58	-58.43	3,064.58	7,802.49	8,181.91	8,077.31	104.61	78.216		
3,200.00	3,168.71	6,514.01	2,545.06	12.73	99.58	-58.43	3,064.58	7,802.49	8,177.76	8,072.72	105.04	77.855		
3,300.00	3,267.40	6,514.01	2,545.06	13.16	99.58	-58.43	3,064.58	7,802.49	8,174.82	8,069.36	105.46	77.518		
3,400.00	3,366.10	6,514.01	2,545.06	13.58	99.58	-58.43	3,064.58	7,802.49	8,173.10	8,067.24	105.86	77.205		
3,490.15	3,455.07	6,514.01	2,545.06	13.97	99.58	-58.43	3,064.58	7,802.49	8,172.61	8,066.39	106.21	76.944		
3,500.00	3,464.79	6,514.01	2,545.06	14.01	99.58	-58.43	3,064.58	7,802.49	8,172.61	8,066.36	106.25	76.917		
3,600.00	3,563.48	6,514.01	2,545.06	14.44	99.58	-58.43	3,064.58	7,802.49	8,173.34	8,066.72	106.63	76.652		
3,700.00	3,662.17	6,514.01	2,545.06	14.87	99.58	-58.43	3,064.58	7,802.49	8,175.30	8,068.31	106.99	76.411		
3,800.00	3,760.86	6,514.01	2,545.06	15.30	99.58	-58.43	3,064.58	7,802.49	8,178.48	8,071.14	107.34	76.194		
3,900.00	3,859.55	6,514.01	2,545.06	15.73	99.58	-58.43	3,064.58	7,802.49	8,182.88	8,075.21	107.67	75.999		
4,000.00	3,958.24	6,514.01	2,545.06	16.16	99.58	-58.43	3,064.58	7,802.49	8,188.49	8,080.51	107.99	75.827		
4,100.00	4,056.94	6,514.01	2,545.06	16.59	99.58	-58.43	3,064.58	7,802.49	8,195.33	8,087.04	108.29	75.678		
4,200.00	4,155.63	6,514.01	2,545.06	17.02	99.58	-58.43	3,064.58	7,802.49	8,203.38	8,094.80	108.58	75.551		
4,300.00	4,254.32	6,514.01	2,545.06	17.45	99.58	-58.43	3,064.58	7,802.49	8,212.63	8,103.78	108.86	75.446		
4,400.00	4,353.01	6,514.01	2,545.06	17.88	99.58	-58.43	3,064.58	7,802.49	8,223.10	8,113.98	109.11	75.362		
4,500.00	4,451.70	6,514.01	2,545.06	18.30	99.58	-58.43	3,064.58	7,802.49	8,234.76	8,125.40	109.36	75.301		
4,600.00	4,550.39	6,514.01	2,545.06	18.73	99.58	-58.43	3,064.58	7,802.49	8,247.62	8,138.03	109.59	75.260		
4,700.00	4,649.08	6,514.01	2,545.06	19.16	99.58	-58.43	3,064.58	7,802.49	8,261.67	8,151.87	109.80	75.241		
4,800.00	4,747.77	6,514.01	2,545.06	19.59	99.58	-58.43	3,064.58	7,802.49	8,276.91	8,166.90	110.00	75.242		
4,900.00	4,846.47	6,514.01	2,545.06	20.02	99.58	-58.43	3,064.58	7,802.49	8,293.32	8,183.13	110.19	75.264		

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit Com 138H - Lateral - Lateral													Offset Site Error:	0.00 ft
Survey Program:		575-MWD+HDGM, 3098-MWD+HDGM						Rule Assigned:				Offset Well Error:	0.00 ft	
Reference	Offset	Semi Major Axis		Offset Wellbore Centre		Distance				Warning				
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
5,000.00	4,945.16	6,514.01	2,545.06	20.45	99.58	-58.43	3,064.58	7,802.49	8,310.90	8,200.54	110.36	75.307		
5,100.00	5,043.85	6,514.01	2,545.06	20.88	99.58	-58.43	3,064.58	7,802.49	8,329.65	8,219.13	110.52	75.369		
5,200.00	5,142.54	6,514.01	2,545.06	21.31	99.58	-58.43	3,064.58	7,802.49	8,349.56	8,238.89	110.66	75.451		
5,300.00	5,241.23	6,514.01	2,545.06	21.74	99.58	-58.43	3,064.58	7,802.49	8,370.61	8,259.81	110.79	75.552		
5,400.00	5,339.92	6,514.01	2,545.06	22.17	99.58	-58.43	3,064.58	7,802.49	8,392.80	8,281.89	110.91	75.673		
5,500.00	5,438.61	6,514.01	2,545.06	22.61	99.58	-58.43	3,064.58	7,802.49	8,416.11	8,305.10	111.01	75.813		
5,600.00	5,537.31	6,514.01	2,545.06	23.04	99.58	-58.43	3,064.58	7,802.49	8,440.55	8,329.45	111.10	75.972		
5,700.00	5,636.00	6,514.01	2,545.06	23.47	99.58	-58.43	3,064.58	7,802.49	8,466.10	8,354.93	111.18	76.149		
5,800.00	5,734.69	6,514.01	2,545.06	23.90	99.58	-58.43	3,064.58	7,802.49	8,492.76	8,381.51	111.24	76.345		
5,900.00	5,833.38	6,514.01	2,545.06	24.33	99.58	-58.43	3,064.58	7,802.49	8,520.50	8,409.20	111.29	76.558		
6,000.00	5,932.07	6,514.01	2,545.06	24.76	99.58	-58.43	3,064.58	7,802.49	8,549.32	8,437.98	111.33	76.790		
6,100.00	6,030.76	6,514.01	2,545.06	25.19	99.58	-58.43	3,064.58	7,802.49	8,579.21	8,467.85	111.36	77.039		
6,200.00	6,129.45	6,514.01	2,545.06	25.62	99.58	-58.43	3,064.58	7,802.49	8,610.16	8,498.78	111.38	77.305		
6,300.00	6,228.15	6,514.01	2,545.06	26.05	99.58	-58.43	3,064.58	7,802.49	8,642.15	8,530.76	111.39	77.588		
6,370.81	6,298.03	6,514.01	2,545.06	26.35	99.58	-58.43	3,064.58	7,802.49	8,665.43	8,554.05	111.38	77.798		
6,400.00	6,326.74	6,514.01	2,545.06	26.48	99.58	-50.61	3,064.58	7,802.49	8,674.60	8,563.21	111.38	77.881		
6,450.00	6,375.33	6,514.01	2,545.06	26.73	99.58	-42.57	3,064.58	7,802.49	8,687.76	8,576.36	111.39	77.991		
6,500.00	6,422.93	6,514.01	2,545.06	26.99	99.58	-37.89	3,064.58	7,802.49	8,697.66	8,586.24	111.42	78.061		
6,550.00	6,469.25	6,514.01	2,545.06	27.29	99.58	-34.91	3,064.58	7,802.49	8,704.26	8,592.79	111.47	78.089		
6,600.00	6,513.99	6,514.01	2,545.06	27.61	99.58	-32.90	3,064.58	7,802.49	8,707.51	8,595.98	111.53	78.075		
6,643.60	6,551.50	6,514.01	2,545.06	27.91	99.58	-31.69	3,064.58	7,802.49	8,707.61	8,596.01	111.60	78.029		
6,650.00	6,556.88	6,514.01	2,545.06	27.96	99.58	-31.54	3,064.58	7,802.49	8,707.41	8,595.80	111.61	78.020		
6,700.00	6,597.66	6,514.01	2,545.06	28.34	99.58	-30.63	3,064.58	7,802.49	8,703.95	8,592.25	111.70	77.922		
6,750.00	6,636.07	6,514.01	2,545.06	28.76	99.58	-30.07	3,064.58	7,802.49	8,697.15	8,585.33	111.81	77.782		
6,800.00	6,671.88	6,514.01	2,545.06	29.21	99.58	-29.81	3,064.58	7,802.49	8,687.04	8,575.10	111.95	77.600		
6,850.00	6,704.87	6,514.01	2,545.06	29.71	99.58	-29.80	3,064.58	7,802.49	8,673.68	8,561.58	112.10	77.376		
6,900.00	6,734.84	6,514.01	2,545.06	30.25	99.58	-30.03	3,064.58	7,802.49	8,657.13	8,544.87	112.27	77.111		
6,950.00	6,761.59	6,514.01	2,545.06	30.85	99.58	-30.50	3,064.58	7,802.49	8,637.48	8,525.03	112.46	76.806		
7,000.00	6,784.97	6,514.01	2,545.06	31.50	99.58	-31.21	3,064.58	7,802.49	8,614.83	8,502.16	112.67	76.462		
7,050.00	6,804.83	6,514.01	2,545.06	32.20	99.58	-32.18	3,064.58	7,802.49	8,589.29	8,476.39	112.90	76.080		
7,100.00	6,821.05	6,514.01	2,545.06	32.96	99.58	-33.44	3,064.58	7,802.49	8,561.00	8,447.85	113.15	75.662		
7,150.00	6,833.53	6,514.01	2,545.06	33.77	99.58	-35.03	3,064.58	7,802.49	8,530.10	8,416.68	113.42	75.210		
7,200.00	6,842.18	6,514.01	2,545.06	34.62	99.58	-37.00	3,064.58	7,802.49	8,496.76	8,383.05	113.70	74.727		
7,250.00	6,846.97	6,514.01	2,545.06	35.52	99.58	-39.44	3,064.58	7,802.49	8,461.15	8,347.14	114.01	74.215		
7,286.15	6,848.00	6,514.01	2,545.06	36.18	99.58	-41.54	3,064.58	7,802.49	8,434.10	8,319.86	114.24	73.829		
7,300.00	6,848.00	6,514.01	2,545.06	36.44	99.58	-41.54	3,064.58	7,802.49	8,423.55	8,309.22	114.33	73.679		
7,400.00	6,848.03	6,514.01	2,545.06	38.40	99.58	-41.54	3,064.58	7,802.49	8,347.62	8,232.62	115.00	72.590		
7,500.00	6,848.05	6,514.01	2,545.06	40.49	99.58	-41.54	3,064.58	7,802.49	8,272.21	8,156.49	115.72	71.484		
7,600.00	6,848.08	6,514.01	2,545.06	42.70	99.58	-41.54	3,064.58	7,802.49	8,197.32	8,080.82	116.50	70.363		
7,700.00	6,848.10	6,514.01	2,545.06	45.01	99.58	-41.54	3,064.58	7,802.49	8,122.97	8,005.64	117.33	69.230		
7,800.00	6,848.12	6,514.01	2,545.06	47.40	99.58	-41.54	3,064.58	7,802.49	8,049.18	7,930.97	118.22	68.088		
7,900.00	6,848.15	6,514.01	2,545.06	49.86	99.58	-41.54	3,064.58	7,802.49	7,975.96	7,856.81	119.15	66.940		
8,000.00	6,848.17	6,514.01	2,545.06	52.39	99.58	-41.54	3,064.58	7,802.49	7,903.33	7,783.20	120.13	65.787		
8,100.00	6,848.20	6,514.01	2,545.06	54.96	99.58	-41.54	3,064.58	7,802.49	7,831.30	7,710.14	121.16	64.633		
8,200.00	6,848.22	6,514.01	2,545.06	57.58	99.58	-41.54	3,064.58	7,802.49	7,759.89	7,637.65	122.24	63.481		
8,300.00	6,848.25	6,514.01	2,545.06	60.24	99.58	-41.54	3,064.58	7,802.49	7,689.12	7,565.76	123.36	62.331		
8,400.00	6,848.27	6,514.01	2,545.06	62.94	99.58	-41.54	3,064.58	7,802.49	7,619.00	7,494.48	124.52	61.186		
8,500.00	6,848.29	6,514.01	2,545.06	65.66	99.58	-41.54	3,064.58	7,802.49	7,549.56	7,423.84	125.72	60.049		
8,600.00	6,848.32	6,514.01	2,545.06	68.42	99.58	-41.54	3,064.58	7,802.49	7,480.81	7,353.84	126.96	58.920		
8,700.00	6,848.34	6,514.01	2,545.06	71.19	99.58	-41.54	3,064.58	7,802.49	7,412.77	7,284.53	128.24	57.802		
8,800.00	6,848.37	6,514.01	2,545.06	73.99	99.58	-41.54	3,064.58	7,802.49	7,345.46	7,215.90	129.56	56.696		
8,900.00	6,848.39	6,514.01	2,545.06	76.80	99.58	-41.54	3,064.58	7,802.49	7,278.90	7,147.99	130.91	55.603		

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit Com 138H - Lateral - Lateral												Offset Site Error:	0.00 ft
Survey Program: 575-MWD+HDGM, 3098-MWD+HDGM												Offset Well Error:	0.00 ft
Reference												Rule Assigned:	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Semi Major Axis Offset	Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (ft)	Separation Factor	Warning
							+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)			
9,000.00	6,848.42	6,514.01	2,545.06	79.63	99.58	-41.54	3,064.58	7,802.49	7,213.12	7,080.83	132.29	54.525	
9,100.00	6,848.44	6,514.01	2,545.06	82.47	99.58	-41.54	3,064.58	7,802.49	7,148.13	7,014.42	133.70	53.462	
9,200.00	6,848.46	6,514.01	2,545.06	85.33	99.58	-41.54	3,064.58	7,802.49	7,083.95	6,948.80	135.15	52.416	
9,300.00	6,848.49	6,514.01	2,545.06	88.20	99.58	-41.54	3,064.58	7,802.49	7,020.61	6,883.99	136.62	51.387	
9,400.00	6,848.51	6,514.01	2,545.06	91.08	99.58	-41.54	3,064.58	7,802.49	6,958.13	6,820.01	138.13	50.376	
9,500.00	6,848.54	6,514.01	2,545.06	93.97	99.58	-41.54	3,064.58	7,802.49	6,896.54	6,756.89	139.65	49.383	
9,600.00	6,848.56	6,514.01	2,545.06	96.87	99.58	-41.54	3,064.58	7,802.49	6,835.86	6,694.65	141.21	48.411	
9,699.73	6,848.58	6,514.01	2,545.06	99.76	99.58	-41.54	3,064.58	7,802.49	6,776.26	6,633.49	142.78	47.460	
9,700.00	6,848.58	6,514.01	2,545.06	99.77	99.58	-41.54	3,064.58	7,802.49	6,776.10	6,633.32	142.78	47.458	
9,799.32	6,848.61	6,514.01	2,545.06	102.67	99.58	-41.54	3,064.58	7,802.49	6,717.70	6,573.34	144.37	46.532	
9,800.00	6,848.61	6,514.01	2,545.06	102.69	99.58	-41.54	3,064.58	7,802.49	6,717.31	6,572.93	144.38	46.525	
9,898.90	6,848.63	6,514.01	2,545.06	105.57	99.58	-41.54	3,064.58	7,802.49	6,660.12	6,514.14	145.98	45.624	
9,900.00	6,848.63	6,514.01	2,545.06	105.61	99.58	-41.54	3,064.58	7,802.49	6,659.49	6,513.50	146.00	45.614	
9,998.54	6,848.66	6,492.26	2,544.67	108.49	99.04	-41.41	3,048.74	7,817.40	6,603.47	6,456.52	146.95	44.936	
10,000.00	6,848.66	6,491.26	2,544.65	108.53	99.01	-41.41	3,048.02	7,818.08	6,602.65	6,455.70	146.95	44.932	
10,098.33	6,848.68	6,416.01	2,543.34	111.42	97.14	-40.96	2,993.21	7,869.63	6,547.16	6,400.88	146.28	44.759	
10,100.00	6,848.68	6,416.01	2,543.34	111.46	97.14	-40.96	2,993.21	7,869.63	6,546.22	6,399.91	146.30	44.744	
10,198.00	6,848.71	6,385.75	2,542.81	114.34	96.39	-40.78	2,971.20	7,890.39	6,491.37	6,344.37	147.00	44.160	
10,200.00	6,848.71	6,385.28	2,542.81	114.40	96.38	-40.78	2,970.86	7,890.71	6,490.26	6,343.24	147.02	44.146	
10,297.66	6,848.73	6,353.01	2,542.06	117.28	95.57	-40.59	2,947.56	7,913.02	6,436.43	6,288.78	147.65	43.592	
10,300.00	6,848.73	6,353.01	2,542.06	117.34	95.57	-40.59	2,947.56	7,913.02	6,435.14	6,287.45	147.69	43.572	
10,397.28	6,848.75	6,353.01	2,542.06	120.21	95.57	-40.59	2,947.56	7,913.02	6,382.34	6,233.02	149.33	42.741	
10,400.00	6,848.75	6,334.88	2,541.66	120.29	95.12	-40.48	2,934.59	7,925.69	6,380.82	6,232.02	148.81	42.880	
10,496.98	6,848.78	6,291.01	2,541.23	123.15	94.01	-40.22	2,903.79	7,956.92	6,328.96	6,179.87	149.08	42.452	
10,500.00	6,848.78	6,291.01	2,541.23	123.24	94.01	-40.22	2,903.79	7,956.92	6,327.34	6,178.21	149.14	42.427	
10,596.60	6,848.80	6,273.64	2,541.19	126.10	93.57	-40.13	2,891.77	7,969.47	6,276.36	6,126.12	150.24	41.776	
10,600.00	6,848.80	6,272.49	2,541.19	126.20	93.54	-40.12	2,890.98	7,970.30	6,274.58	6,124.32	150.26	41.758	
10,698.40	6,848.83	5,547.01	2,557.40	129.11	75.82	-35.63	2,365.15	8,467.43	6,217.42	6,088.69	128.73	48.297	
10,700.00	6,848.83	5,547.01	2,557.40	129.16	75.82	-35.63	2,365.15	8,467.43	6,216.48	6,087.72	128.76	48.280	
10,797.95	6,848.85	5,547.01	2,557.40	132.06	75.82	-35.63	2,365.15	8,467.43	6,159.00	6,028.64	130.36	47.246	
10,800.00	6,848.85	5,547.01	2,557.40	132.12	75.82	-35.63	2,365.15	8,467.43	6,157.80	6,027.41	130.39	47.225	
10,897.60	6,848.87	5,520.83	2,557.94	135.01	75.21	-35.44	2,345.16	8,484.32	6,101.31	5,970.18	131.13	46.529	
10,900.00	6,848.88	5,520.50	2,557.95	135.08	75.20	-35.44	2,344.91	8,484.54	6,099.93	5,968.78	131.16	46.508	
10,997.26	6,848.90	5,482.35	2,558.14	137.97	74.31	-35.17	2,316.01	8,509.45	6,044.79	5,913.31	131.48	45.974	
11,000.00	6,848.90	5,480.56	2,558.16	138.05	74.26	-35.16	2,314.66	8,510.61	6,043.24	5,911.77	131.47	45.967	
11,097.12	6,848.92	5,382.85	2,559.56	140.94	71.98	-34.46	2,240.35	8,574.04	5,988.11	5,858.35	129.76	46.148	
11,100.00	6,848.92	5,382.18	2,559.57	141.02	71.97	-34.46	2,239.84	8,574.47	5,986.48	5,856.70	129.78	46.127	
11,196.74	6,848.95	5,363.01	2,559.77	143.90	71.52	-34.32	2,225.24	8,586.89	5,932.17	5,801.43	130.74	45.375	
11,200.00	6,848.95	5,363.01	2,559.77	144.00	71.52	-34.32	2,225.24	8,586.89	5,930.35	5,799.56	130.79	45.343	
11,296.37	6,848.97	5,337.78	2,559.85	146.86	70.94	-34.13	2,206.07	8,603.29	5,877.12	5,745.59	131.53	44.683	
11,300.00	6,848.97	5,336.98	2,559.85	146.97	70.92	-34.13	2,205.46	8,603.82	5,875.13	5,743.57	131.56	44.657	
11,396.01	6,849.00	5,302.01	2,559.64	149.83	70.10	-33.87	2,179.01	8,626.69	5,823.06	5,691.10	131.95	44.130	
11,400.00	6,849.00	5,302.01	2,559.64	149.95	70.10	-33.87	2,179.01	8,626.69	5,820.91	5,688.89	132.02	44.091	
11,495.57	6,849.02	5,302.01	2,559.64	152.80	70.10	-33.87	2,179.01	8,626.69	5,769.93	5,636.29	133.64	43.175	
11,500.00	6,849.02	5,302.01	2,559.64	152.93	70.10	-33.87	2,179.01	8,626.69	5,767.59	5,633.88	133.72	43.133	
11,595.19	6,849.04	5,278.33	2,559.27	155.77	69.55	-33.69	2,161.21	8,642.30	5,717.82	5,583.33	134.49	42.514	
11,600.00	6,849.04	5,277.50	2,559.25	155.91	69.53	-33.69	2,160.59	8,642.85	5,715.33	5,580.79	134.54	42.479	
11,694.81	6,849.07	5,241.01	2,558.24	158.74	68.67	-33.41	2,133.39	8,667.16	5,666.93	5,532.08	134.85	42.023	
11,700.00	6,849.07	5,241.01	2,558.24	158.90	68.67	-33.41	2,133.39	8,667.16	5,664.29	5,529.35	134.94	41.976	
11,796.08	6,849.09	4,721.35	2,576.58	161.76	56.83	-29.54	1,745.41	9,011.24	5,611.02	5,493.06	117.95	47.570	
11,800.00	6,849.09	4,720.08	2,576.69	161.88	56.80	-29.54	1,744.47	9,012.08	5,608.83	5,490.86	117.97	47.544	
11,895.66	6,849.12	4,689.01	2,579.49	164.74	56.11	-29.31	1,721.51	9,032.83	5,555.95	5,437.53	118.42	46.918	

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit Com 138H - Lateral - Lateral													Offset Site Error:	0.00 ft
Survey Program: 575-MWD+HDGM, 3098-MWD+HDGM													Offset Well Error:	0.00 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Semi Major Axis Offset	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Distance Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
11,900.00	6,849.12	4,689.01	2,579.49	164.87	56.11	-29.31	1,721.51	9,032.83	5,553.57	5,435.08	118.49	46.870		
11,995.20	6,849.14	4,689.01	2,579.49	167.72	56.11	-29.31	1,721.51	9,032.83	5,501.96	5,381.92	120.04	45.833		
12,000.00	6,849.14	4,689.01	2,579.49	167.86	56.11	-29.31	1,721.51	9,032.83	5,499.39	5,379.27	120.12	45.781		
12,094.85	6,849.16	4,660.22	2,581.98	170.70	55.46	-29.09	1,700.52	9,052.37	5,448.85	5,328.20	120.64	45.164		
12,100.00	6,849.17	4,659.45	2,582.04	170.85	55.44	-29.09	1,699.97	9,052.90	5,446.13	5,325.43	120.70	45.121		
12,194.46	6,849.19	4,628.01	2,584.71	173.68	54.74	-28.86	1,677.66	9,074.90	5,397.09	5,275.96	121.13	44.556		
12,200.00	6,849.19	4,628.01	2,584.71	173.84	54.74	-28.86	1,677.66	9,074.90	5,394.23	5,273.00	121.22	44.498		
12,294.01	6,849.21	4,628.01	2,584.71	176.66	54.74	-28.86	1,677.66	9,074.90	5,346.28	5,223.50	122.78	43.544		
12,300.00	6,849.21	4,628.01	2,584.71	176.84	54.74	-28.86	1,677.66	9,074.90	5,343.26	5,220.38	122.88	43.485		
12,393.83	6,849.24	4,535.11	2,592.54	179.65	52.63	-28.20	1,612.95	9,141.09	5,296.58	5,175.51	121.08	43.745		
12,400.00	6,849.24	4,530.74	2,592.94	179.83	52.54	-28.17	1,609.89	9,144.18	5,293.49	5,172.47	121.02	43.739		
12,494.04	6,849.26	4,338.97	2,606.68	182.65	48.39	-26.68	1,470.34	9,274.89	5,245.96	5,130.51	115.45	45.438		
12,500.00	6,849.26	4,336.77	2,606.82	182.83	48.35	-26.66	1,468.69	9,276.35	5,242.91	5,127.44	115.47	45.406		
12,593.65	6,849.29	4,322.01	2,607.75	185.63	48.04	-26.54	1,457.66	9,286.10	5,195.39	5,078.96	116.43	44.623		
12,600.00	6,849.29	4,322.01	2,607.75	185.82	48.04	-26.54	1,457.66	9,286.10	5,192.21	5,075.68	116.53	44.556		
12,693.28	6,849.31	4,289.32	2,609.65	188.62	47.36	-26.27	1,433.35	9,307.87	5,145.87	5,029.06	116.81	44.055		
12,700.00	6,849.31	4,287.87	2,609.73	188.82	47.33	-26.26	1,432.27	9,308.84	5,142.57	5,025.71	116.86	44.007		
12,792.87	6,849.33	4,260.01	2,611.14	191.61	46.75	-26.03	1,411.76	9,327.64	5,097.61	4,980.30	117.30	43.457		
12,800.00	6,849.34	4,260.01	2,611.14	191.82	46.75	-26.03	1,411.76	9,327.64	5,094.19	4,976.77	117.42	43.385		
12,892.45	6,849.36	4,239.12	2,612.10	194.60	46.31	-25.86	1,396.46	9,341.84	5,050.49	4,932.38	118.12	42.758		
12,900.00	6,849.36	4,236.68	2,612.21	194.82	46.26	-25.84	1,394.69	9,343.50	5,046.97	4,928.82	118.15	42.717		
12,992.16	6,849.38	4,175.19	2,614.57	197.59	44.99	-25.33	1,349.64	9,385.28	5,004.43	4,887.16	117.26	42.676		
13,000.00	6,849.38	4,169.93	2,614.75	197.82	44.89	-25.29	1,345.75	9,388.81	5,000.82	4,883.63	117.19	42.674		
13,092.03	6,849.41	4,072.01	2,617.55	200.59	42.95	-24.44	1,272.06	9,453.23	4,958.25	4,843.44	114.81	43.186		
13,100.00	6,849.41	4,072.01	2,617.55	200.83	42.95	-24.44	1,272.06	9,453.23	4,954.61	4,839.67	114.94	43.106		
13,191.61	6,849.43	4,042.96	2,617.94	203.58	42.40	-24.17	1,249.81	9,471.89	4,913.16	4,797.92	115.24	42.635		
13,200.00	6,849.43	4,041.27	2,617.95	203.83	42.37	-24.16	1,248.51	9,472.98	4,909.42	4,794.12	115.30	42.578		
13,291.17	6,849.45	4,009.01	2,617.78	206.57	41.75	-23.86	1,223.76	9,493.67	4,869.51	4,754.07	115.44	42.181		
13,300.00	6,849.46	4,009.01	2,617.78	206.83	41.75	-23.86	1,223.76	9,493.67	4,865.68	4,750.10	115.58	42.098		
13,390.66	6,849.48	4,009.01	2,617.78	209.56	41.75	-23.86	1,223.76	9,493.67	4,827.17	4,710.16	117.01	41.254		
13,400.00	6,849.48	4,009.01	2,617.78	209.84	41.75	-23.86	1,223.76	9,493.67	4,823.28	4,706.12	117.16	41.169		
13,490.13	6,849.50	4,009.01	2,617.78	212.55	41.75	-23.86	1,223.76	9,493.67	4,786.53	4,667.96	118.57	40.368		
13,500.00	6,849.50	4,009.01	2,617.78	212.84	41.75	-23.86	1,223.76	9,493.67	4,782.59	4,663.87	118.73	40.282		
13,589.72	6,849.53	3,980.09	2,616.98	215.54	41.21	-23.59	1,201.61	9,512.24	4,747.14	4,628.20	118.94	39.912		
13,600.00	6,849.53	3,978.79	2,616.93	215.85	41.19	-23.58	1,200.62	9,513.08	4,743.18	4,624.13	119.05	39.843		
13,689.19	6,849.55	3,946.01	2,615.07	218.53	40.58	-23.27	1,175.66	9,534.25	4,709.79	4,590.72	119.06	39.557		
13,700.00	6,849.55	3,946.01	2,615.07	218.86	40.58	-23.27	1,175.66	9,534.25	4,705.77	4,586.54	119.23	39.468		
13,788.70	6,849.57	3,946.01	2,615.07	221.53	40.58	-23.27	1,175.66	9,534.25	4,673.61	4,553.02	120.59	38.757		
13,800.00	6,849.58	3,946.01	2,615.07	221.87	40.58	-23.27	1,175.66	9,534.25	4,669.62	4,548.86	120.76	38.668		
13,888.14	6,849.60	3,946.01	2,615.07	224.52	40.58	-23.27	1,175.66	9,534.25	4,639.31	4,517.21	122.10	37.997		
13,900.00	6,849.60	3,946.01	2,615.07	224.87	40.58	-23.27	1,175.66	9,534.25	4,635.34	4,513.07	122.28	37.908		
13,987.73	6,849.62	3,903.18	2,611.99	227.52	39.79	-22.86	1,143.40	9,562.24	4,606.46	4,484.66	121.80	37.820		
14,000.00	6,849.63	3,899.08	2,611.69	227.88	39.72	-22.82	1,140.33	9,564.95	4,602.52	4,480.71	121.81	37.784		
14,087.88	6,849.65	3,729.51	2,604.34	230.53	36.67	-21.26	1,015.67	9,679.57	4,573.24	4,457.03	116.21	39.354		
14,100.00	6,849.65	3,725.81	2,604.30	230.89	36.61	-21.23	1,013.07	9,682.20	4,569.27	4,453.03	116.24	39.309		
14,187.35	6,849.67	3,695.01	2,604.11	233.52	36.06	-20.96	991.79	9,704.47	4,541.31	4,425.00	116.32	39.043		
14,200.00	6,849.67	3,695.01	2,604.11	233.90	36.06	-20.96	991.79	9,704.47	4,537.35	4,420.85	116.50	38.948		
14,286.88	6,849.70	3,671.18	2,604.01	236.52	35.65	-20.76	975.74	9,722.08	4,510.85	4,394.01	116.84	38.608		
14,300.00	6,849.70	3,667.60	2,603.99	236.92	35.58	-20.73	973.36	9,724.75	4,506.95	4,390.06	116.89	38.557		
14,386.43	6,849.72	3,632.01	2,603.78	239.52	34.96	-20.44	950.04	9,751.64	4,481.98	4,365.20	116.79	38.378		
14,400.00	6,849.72	3,632.01	2,603.78	239.93	34.96	-20.44	950.04	9,751.64	4,478.14	4,361.17	116.97	38.283		
14,485.87	6,849.74	3,632.01	2,603.78	242.51	34.96	-20.44	950.04	9,751.64	4,454.71	4,336.56	118.16	37.701		

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit Com 138H - Lateral - Lateral											Offset Site Error:	0.00 ft
Survey Program: 575-MWD+HDGM, 3098-MWD+HDGM											Offset Well Error:	0.00 ft
Reference											Rule Assigned:	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Semi Major Axis Offset	Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (ft)	Separation Factor
							+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)		Warning
14,500.00	6,849.75	3,632.01	2,603.78	242.94	34.96	-20.44	950.04	9,751.64	4,451.01	4,332.65	118.35	37.608
14,585.53	6,849.77	3,592.89	2,603.40	245.52	34.29	-20.13	925.29	9,781.93	4,428.92	4,310.81	118.11	37.498
14,600.00	6,849.77	3,569.01	2,603.06	245.95	33.88	-19.94	910.67	9,800.81	4,425.47	4,308.00	117.47	37.674
14,684.99	6,849.79	3,569.01	2,603.06	248.51	33.88	-19.94	910.67	9,800.81	4,404.91	4,286.31	118.60	37.141
14,700.00	6,849.80	3,557.48	2,602.88	248.96	33.69	-19.85	903.72	9,810.01	4,401.41	4,283.01	118.40	37.173
14,784.64	6,849.82	3,507.01	2,602.16	251.52	32.86	-19.47	873.78	9,850.63	4,382.23	4,264.43	117.80	37.199
14,800.00	6,849.82	3,507.01	2,602.16	251.98	32.86	-19.47	873.78	9,850.63	4,378.83	4,260.83	118.00	37.108
14,884.20	6,849.84	3,478.07	2,601.65	254.52	32.42	-19.25	856.89	9,874.12	4,360.90	4,242.77	118.13	36.916
14,900.00	6,849.84	3,473.00	2,601.53	254.99	32.34	-19.22	853.94	9,878.25	4,357.66	4,239.50	118.16	36.878
14,983.73	6,849.86	3,444.01	2,600.70	257.52	31.89	-19.00	837.14	9,901.86	4,341.16	4,222.90	118.26	36.708
15,000.00	6,849.87	3,444.01	2,600.70	258.01	31.89	-19.00	837.14	9,901.86	4,338.09	4,219.62	118.46	36.619
15,083.39	6,849.89	3,401.63	2,599.13	260.52	31.28	-18.68	812.71	9,936.45	4,322.89	4,204.77	118.12	36.596
15,100.00	6,849.89	3,378.43	2,598.15	261.02	30.95	-18.50	799.36	9,955.39	4,320.02	4,202.43	117.58	36.740
15,183.21	6,849.91	3,301.34	2,594.90	263.53	29.96	-17.91	754.19	10,017.78	4,305.48	4,189.35	116.13	37.075
15,200.00	6,849.92	3,294.38	2,594.60	264.04	29.87	-17.86	750.08	10,023.38	4,302.60	4,186.49	116.11	37.056
15,282.79	6,849.94	3,255.01	2,592.71	266.53	29.41	-17.55	726.91	10,055.17	4,289.01	4,173.16	115.85	37.023
15,300.00	6,849.94	3,255.01	2,592.71	267.05	29.41	-17.55	726.91	10,055.17	4,286.31	4,170.26	116.05	36.936
15,382.34	6,849.96	3,224.01	2,590.92	269.54	29.07	-17.31	708.93	10,080.36	4,274.16	4,158.11	116.04	36.832
15,400.00	6,849.97	3,215.68	2,590.41	270.07	28.99	-17.24	704.10	10,087.12	4,271.68	4,155.68	115.99	36.827
15,482.06	6,849.98	3,161.01	2,587.06	272.54	28.47	-16.81	672.08	10,131.30	4,260.41	4,145.15	115.26	36.965
15,500.00	6,849.99	3,161.01	2,587.06	273.08	28.47	-16.81	672.08	10,131.30	4,258.09	4,142.64	115.45	36.881
15,581.39	6,850.01	3,161.01	2,587.06	275.54	28.47	-16.81	672.08	10,131.30	4,248.52	4,132.19	116.34	36.519
15,600.00	6,850.01	3,161.01	2,587.06	276.10	28.47	-16.81	672.08	10,131.30	4,246.55	4,130.02	116.54	36.439
15,680.89	6,850.03	3,145.60	2,585.78	278.54	28.33	-16.69	663.03	10,143.72	4,238.61	4,121.68	116.93	36.250
15,700.00	6,850.04	3,144.22	2,585.64	279.12	28.32	-16.68	662.23	10,144.83	4,236.97	4,119.89	117.08	36.188
15,780.27	6,850.06	3,130.01	2,583.93	281.54	28.20	-16.57	654.03	10,156.31	4,231.07	4,113.60	117.47	36.018
15,800.00	6,850.06	3,130.01	2,583.93	282.14	28.20	-16.57	654.03	10,156.31	4,229.79	4,112.12	117.67	35.947
15,879.68	6,850.08	3,130.01	2,583.93	284.54	28.20	-16.57	654.03	10,156.31	4,225.53	4,107.09	118.44	35.677
15,900.00	6,850.09	3,130.01	2,583.93	285.15	28.20	-16.57	654.03	10,156.31	4,224.69	4,106.05	118.63	35.612
15,979.06	6,850.11	3,130.01	2,583.93	287.54	28.20	-16.57	654.03	10,156.31	4,222.33	4,102.96	119.36	35.374
16,000.00	6,850.11	3,130.01	2,583.93	288.17	28.20	-16.57	654.03	10,156.31	4,221.95	4,102.40	119.55	35.315
16,065.59	6,850.13	3,130.01	2,583.93	290.15	28.20	-16.57	654.03	10,156.31	4,221.44	4,101.31	120.13	35.141 CC
16,100.00	6,850.13	3,130.01	2,583.93	291.19	28.20	-16.57	654.03	10,156.31	4,221.58	4,101.15	120.43	35.056 ES
16,122.44	6,850.14	3,115.05	2,581.61	291.87	28.09	-16.45	645.59	10,168.44	4,221.50	4,101.31	120.19	35.123
16,200.00	6,850.16	3,098.01	2,578.30	294.21	27.96	-16.31	636.27	10,182.31	4,223.20	4,102.84	120.36	35.089
16,300.00	6,850.18	3,098.01	2,578.30	297.23	27.96	-16.31	636.27	10,182.31	4,226.95	4,105.80	121.14	34.892
16,400.00	6,850.21	3,098.01	2,578.30	300.25	27.96	-16.31	636.27	10,182.31	4,233.06	4,111.18	121.88	34.731
16,500.00	6,850.23	3,098.01	2,578.30	303.27	27.96	-16.31	636.27	10,182.31	4,241.52	4,118.95	122.57	34.605
16,600.00	6,850.26	3,098.01	2,578.30	306.28	27.96	-16.31	636.27	10,182.31	4,252.31	4,129.10	123.21	34.513
16,700.00	6,850.28	3,098.01	2,578.30	309.30	27.96	-16.31	636.27	10,182.31	4,265.42	4,141.63	123.80	34.455 SF
16,800.00	6,850.30	3,061.87	2,569.25	312.32	27.39	-16.03	616.98	10,211.48	4,279.38	4,156.10	123.28	34.712
16,900.00	6,850.33	3,031.01	2,559.50	315.35	26.91	-15.78	600.75	10,235.85	4,296.88	4,174.01	122.87	34.970
17,000.00	6,850.35	3,031.01	2,559.50	318.37	26.91	-15.78	600.75	10,235.85	4,315.57	4,192.26	123.31	34.997
17,100.00	6,850.38	3,031.01	2,559.50	321.39	26.91	-15.78	600.75	10,235.85	4,336.49	4,212.79	123.70	35.056
17,200.00	6,850.40	3,031.01	2,559.50	324.41	26.91	-15.78	600.75	10,235.85	4,359.61	4,235.56	124.04	35.145
17,300.00	6,850.43	3,031.01	2,559.50	327.43	26.91	-15.78	600.75	10,235.85	4,384.88	4,260.54	124.34	35.266
17,400.00	6,850.45	2,994.34	2,546.32	330.45	26.03	-15.48	581.85	10,264.37	4,411.55	4,288.05	123.50	35.720
17,500.00	6,850.47	2,970.01	2,537.00	333.47	25.45	-15.29	569.56	10,283.19	4,440.29	4,317.27	123.02	36.094
17,600.00	6,850.50	2,970.01	2,537.00	336.49	25.45	-15.29	569.56	10,283.19	4,470.76	4,347.56	123.20	36.288
17,700.00	6,850.52	2,909.01	2,512.56	339.52	24.01	-14.81	539.44	10,330.27	4,502.63	4,380.96	121.67	37.006
17,800.00	6,850.55	2,884.10	2,502.31	342.54	23.44	-14.62	527.31	10,349.46	4,535.92	4,414.78	121.14	37.444
17,900.00	6,850.57	2,847.01	2,486.81	345.56	22.58	-14.33	509.23	10,377.90	4,570.56	4,450.30	120.26	38.005

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit Com 138H - Lateral - Lateral													Offset Site Error:	0.00 ft
Survey Program: 575-MWD+HDGM, 3098-MWD+HDGM													Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Rule Assigned:		Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
18,000.00	6,850.59	2,847.01	2,486.81	348.58	22.58	-14.33	509.23	10,377.90	4,606.81	4,486.48	120.33	38.286		
18,100.00	6,850.62	2,820.20	2,475.17	351.61	21.98	-14.12	496.34	10,398.32	4,644.48	4,524.79	119.69	38.805		
18,200.00	6,850.64	2,786.01	2,459.38	354.63	21.22	-13.87	480.45	10,424.14	4,684.15	4,565.28	118.87	39.406		
18,300.00	6,850.67	2,786.01	2,459.38	357.65	21.22	-13.87	480.45	10,424.14	4,724.90	4,606.05	118.85	39.756		
18,400.00	6,850.69	2,786.01	2,459.38	360.67	21.22	-13.87	480.45	10,424.14	4,767.39	4,648.60	118.79	40.133		
18,500.00	6,850.72	2,786.01	2,459.38	363.70	21.22	-13.87	480.45	10,424.14	4,811.59	4,692.89	118.70	40.535		
18,600.00	6,850.74	2,755.99	2,444.65	366.72	20.58	-13.64	466.88	10,446.50	4,856.89	4,738.97	117.93	41.186		
18,700.00	6,850.76	2,725.01	2,428.60	369.75	19.92	-13.41	453.11	10,469.14	4,904.04	4,786.91	117.13	41.870		
18,800.00	6,850.79	2,725.01	2,428.60	372.77	19.92	-13.41	453.11	10,469.14	4,952.17	4,835.20	116.97	42.337		
18,900.00	6,850.81	2,725.01	2,428.60	375.79	19.92	-13.41	453.11	10,469.14	5,001.84	4,885.05	116.79	42.827		
19,000.00	6,850.84	2,700.67	2,415.49	378.82	19.43	-13.24	442.49	10,486.69	5,052.76	4,936.65	116.10	43.520		
19,100.00	6,850.86	2,664.01	2,395.14	381.84	18.69	-12.97	426.89	10,512.89	5,105.06	4,989.88	115.18	44.324		
19,200.00	6,850.89	2,664.01	2,395.14	384.87	18.69	-12.97	426.89	10,512.89	5,158.23	5,043.28	114.95	44.874		
19,300.00	6,850.91	2,664.01	2,395.14	387.89	18.69	-12.97	426.89	10,512.89	5,212.77	5,098.07	114.70	45.447		
19,400.00	6,850.93	2,602.01	2,359.46	390.91	17.48	-12.54	401.45	10,556.75	5,268.21	5,154.86	113.35	46.477		
19,500.00	6,850.96	2,602.01	2,359.46	393.94	17.48	-12.54	401.45	10,556.75	5,324.56	5,211.48	113.08	47.085		
19,600.00	6,850.98	2,577.62	2,345.06	396.96	17.02	-12.38	391.73	10,573.86	5,381.99	5,269.58	112.41	47.880		
19,673.90	6,851.00	2,562.83	2,336.22	399.20	16.75	-12.28	385.91	10,584.19	5,425.06	5,313.10	111.96	48.455		
19,700.00	6,851.01	2,541.01	2,323.01	399.99	16.34	-12.14	377.44	10,599.36	5,440.49	5,328.94	111.55	48.773		
19,773.90	6,851.02	2,541.01	2,323.01	402.22	16.34	-12.14	377.44	10,599.36	5,484.17	5,372.84	111.33	49.260		

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit Com 138H - Pilot - Pilot												Offset Site Error:	0.00 ft
Survey Program: 575-MWD+HDGM												Offset Well Error:	0.00 ft
Reference												Rule Assigned:	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (ft)	Separation Factor	Warning
							+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)			
0.00	0.00	3,539.01	2,752.27	0.00	39.46	85.16	832.92	9,828.07	10,301.41				
100.00	100.00	3,539.01	2,752.27	0.30	39.46	85.16	832.92	9,828.07	10,273.00	10,247.33	25.67	400.247	
200.00	200.00	3,539.01	2,752.27	0.66	39.46	85.16	832.92	9,828.07	10,245.49	10,219.62	25.87	395.962	
300.00	300.00	3,539.01	2,752.27	1.01	39.46	85.16	832.92	9,828.07	10,218.89	10,192.73	26.16	390.617	
400.00	400.00	3,539.01	2,752.27	1.37	39.46	85.16	832.92	9,828.07	10,193.19	10,166.71	26.48	384.898	
500.00	500.00	3,539.01	2,752.27	1.73	39.46	85.16	832.92	9,828.07	10,168.42	10,141.60	26.82	379.099	
600.00	599.98	3,539.01	2,752.27	2.08	39.46	-39.89	832.92	9,828.07	10,143.27	10,116.10	27.17	373.340	
700.00	699.84	3,539.01	2,752.27	2.42	39.46	-40.25	832.92	9,828.07	10,116.45	10,088.92	27.52	367.565	
800.00	799.45	3,539.01	2,752.27	2.77	39.46	-40.64	832.92	9,828.07	10,087.98	10,060.09	27.89	361.735	
900.00	898.70	3,539.01	2,752.27	3.13	39.46	-41.05	832.92	9,828.07	10,057.89	10,029.62	28.26	355.853	
963.97	961.95	3,539.01	2,752.27	3.37	39.46	-41.33	832.92	9,828.07	10,037.79	10,009.28	28.51	352.032	
1,000.00	997.50	3,539.01	2,752.27	3.51	39.46	-41.33	832.92	9,828.07	10,026.35	9,997.70	28.65	349.903	
1,100.00	1,096.19	3,539.01	2,752.27	3.90	39.46	-41.33	832.92	9,828.07	9,995.20	9,966.16	29.04	344.178	
1,200.00	1,194.89	3,539.01	2,752.27	4.30	39.46	-41.33	832.92	9,828.07	9,964.96	9,935.53	29.43	338.548	
1,300.00	1,293.58	3,539.01	2,752.27	4.70	39.46	-41.33	832.92	9,828.07	9,935.64	9,905.80	29.83	333.034	
1,400.00	1,392.27	3,539.01	2,752.27	5.11	39.46	-41.33	832.92	9,828.07	9,907.23	9,877.00	30.24	327.648	
1,500.00	1,490.96	3,539.01	2,752.27	5.52	39.46	-41.33	832.92	9,828.07	9,879.76	9,849.12	30.64	322.399	
1,600.00	1,589.65	3,539.01	2,752.27	5.94	39.46	-41.33	832.92	9,828.07	9,853.23	9,822.17	31.05	317.291	
1,700.00	1,688.34	3,539.01	2,752.27	6.36	39.46	-41.33	832.92	9,828.07	9,827.64	9,796.17	31.47	312.326	
1,800.00	1,787.03	3,539.01	2,752.27	6.78	39.46	-41.33	832.92	9,828.07	9,803.00	9,771.12	31.88	307.506	
1,900.00	1,885.73	3,539.01	2,752.27	7.20	39.46	-41.33	832.92	9,828.07	9,779.33	9,747.03	32.29	302.829	
2,000.00	1,984.42	3,539.01	2,752.27	7.62	39.46	-41.33	832.92	9,828.07	9,756.62	9,723.91	32.71	298.295	
2,100.00	2,083.11	3,539.01	2,752.27	8.04	39.46	-41.33	832.92	9,828.07	9,734.88	9,701.76	33.12	293.902	
2,200.00	2,181.80	3,539.01	2,752.27	8.46	39.46	-41.33	832.92	9,828.07	9,714.13	9,680.59	33.54	289.646	
2,300.00	2,280.49	3,539.01	2,752.27	8.89	39.46	-41.33	832.92	9,828.07	9,694.37	9,660.41	33.95	285.526	
2,400.00	2,379.18	3,539.01	2,752.27	9.31	39.46	-41.33	832.92	9,828.07	9,675.59	9,641.23	34.37	281.539	
2,500.00	2,477.87	3,539.01	2,752.27	9.74	39.46	-41.33	832.92	9,828.07	9,657.82	9,623.04	34.78	277.682	
2,600.00	2,576.56	3,539.01	2,752.27	10.16	39.46	-41.33	832.92	9,828.07	9,641.05	9,605.86	35.19	273.953	
2,700.00	2,675.26	3,539.01	2,752.27	10.59	39.46	-41.33	832.92	9,828.07	9,625.29	9,589.69	35.60	270.347	
2,800.00	2,773.95	3,539.01	2,752.27	11.02	39.46	-41.33	832.92	9,828.07	9,610.55	9,574.54	36.01	266.862	
2,900.00	2,872.64	3,539.01	2,752.27	11.44	39.46	-41.33	832.92	9,828.07	9,596.83	9,560.40	36.42	263.495	
3,000.00	2,971.33	3,539.01	2,752.27	11.87	39.46	-41.33	832.92	9,828.07	9,584.12	9,547.30	36.83	260.243	
3,100.00	3,070.02	3,539.01	2,752.27	12.30	39.46	-41.33	832.92	9,828.07	9,572.45	9,535.22	37.23	257.104	
3,200.00	3,168.71	3,539.01	2,752.27	12.73	39.46	-41.33	832.92	9,828.07	9,561.81	9,524.18	37.63	254.074	
3,300.00	3,267.40	3,539.01	2,752.27	13.16	39.46	-41.33	832.92	9,828.07	9,552.20	9,514.17	38.03	251.150	
3,400.00	3,366.10	3,539.01	2,752.27	13.58	39.46	-41.33	832.92	9,828.07	9,543.64	9,505.20	38.43	248.330	
3,500.00	3,464.79	3,539.01	2,752.27	14.01	39.46	-41.33	832.92	9,828.07	9,536.11	9,497.28	38.83	245.612	
3,600.00	3,563.48	3,539.01	2,752.27	14.44	39.46	-41.33	832.92	9,828.07	9,529.62	9,490.41	39.22	242.991	
3,700.00	3,662.17	3,539.01	2,752.27	14.87	39.46	-41.33	832.92	9,828.07	9,524.19	9,484.58	39.61	240.467	
3,800.00	3,760.86	3,539.01	2,752.27	15.30	39.46	-41.33	832.92	9,828.07	9,519.80	9,479.80	39.99	238.036	
3,900.00	3,859.55	3,539.01	2,752.27	15.73	39.46	-41.33	832.92	9,828.07	9,516.45	9,476.08	40.38	235.696	
4,000.00	3,958.24	3,539.01	2,752.27	16.16	39.46	-41.33	832.92	9,828.07	9,514.16	9,473.41	40.76	233.445	
4,100.00	4,056.94	3,539.01	2,752.27	16.59	39.46	-41.33	832.92	9,828.07	9,512.92	9,471.79	41.13	231.281	
4,168.07	4,124.12	3,539.01	2,752.27	16.88	39.46	-41.33	832.92	9,828.07	9,512.68	9,471.29	41.39	229.855	
4,200.00	4,155.63	3,539.01	2,752.27	17.02	39.46	-41.33	832.92	9,828.07	9,512.73	9,471.23	41.50	229.200	
4,300.00	4,254.32	3,539.01	2,752.27	17.45	39.46	-41.33	832.92	9,828.07	9,513.59	9,471.72	41.87	227.201	
4,400.00	4,353.01	3,539.01	2,752.27	17.88	39.46	-41.33	832.92	9,828.07	9,515.50	9,473.27	42.24	225.283	
4,500.00	4,451.70	3,539.01	2,752.27	18.30	39.46	-41.33	832.92	9,828.07	9,518.47	9,475.87	42.60	223.442	
4,600.00	4,550.39	3,539.01	2,752.27	18.73	39.46	-41.33	832.92	9,828.07	9,522.48	9,479.52	42.96	221.677	
4,700.00	4,649.08	3,539.01	2,752.27	19.16	39.46	-41.33	832.92	9,828.07	9,527.54	9,484.23	43.31	219.985	
4,800.00	4,747.77	3,539.01	2,752.27	19.59	39.46	-41.33	832.92	9,828.07	9,533.64	9,489.99	43.66	218.366	
4,900.00	4,846.47	3,539.01	2,752.27	20.02	39.46	-41.33	832.92	9,828.07	9,540.79	9,496.79	44.00	216.817	

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit Com 138H - Pilot - Pilot													Offset Site Error:	0.00 ft		
Survey Program:		575-MWD+HDGM <th colspan="2">Offset</th> <th colspan="2">Semi Major Axis</th> <th colspan="2">Offset Wellbore Centre</th> <th colspan="2">Rule Assigned:</th> <th>Offset Well Error:</th> <td>0.00 ft</td>					Offset		Semi Major Axis		Offset Wellbore Centre		Rule Assigned:		Offset Well Error:	0.00 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning			
5,000.00	4,945.16	3,539.01	2,752.27	20.45	39.46	-41.33	832.92	9,828.07	9,548.99	9,504.64	44.34	215.336				
5,100.00	5,043.85	3,539.01	2,752.27	20.88	39.46	-41.33	832.92	9,828.07	9,558.22	9,513.54	44.68	213.922				
5,200.00	5,142.54	3,539.01	2,752.27	21.31	39.46	-41.33	832.92	9,828.07	9,568.49	9,523.47	45.01	212.572				
5,300.00	5,241.23	3,539.01	2,752.27	21.74	39.46	-41.33	832.92	9,828.07	9,579.79	9,534.45	45.34	211.286				
5,400.00	5,339.92	3,539.01	2,752.27	22.17	39.46	-41.33	832.92	9,828.07	9,592.12	9,546.45	45.66	210.061				
5,500.00	5,438.61	3,539.01	2,752.27	22.61	39.46	-41.33	832.92	9,828.07	9,605.47	9,559.49	45.98	208.897				
5,600.00	5,537.31	3,539.01	2,752.27	23.04	39.46	-41.33	832.92	9,828.07	9,619.85	9,573.55	46.30	207.790				
5,700.00	5,636.00	3,539.01	2,752.27	23.47	39.46	-41.33	832.92	9,828.07	9,635.24	9,588.63	46.61	206.741				
5,800.00	5,734.69	3,539.01	2,752.27	23.90	39.46	-41.33	832.92	9,828.07	9,651.64	9,604.73	46.91	205.747				
5,900.00	5,833.38	3,539.01	2,752.27	24.33	39.46	-41.33	832.92	9,828.07	9,669.05	9,621.84	47.21	204.808				
6,000.00	5,932.07	3,539.01	2,752.27	24.76	39.46	-41.33	832.92	9,828.07	9,687.47	9,639.96	47.51	203.921				
6,100.00	6,030.76	3,539.01	2,752.27	25.19	39.46	-41.33	832.92	9,828.07	9,706.87	9,659.08	47.80	203.085				
6,200.00	6,129.45	3,539.01	2,752.27	25.62	39.46	-41.33	832.92	9,828.07	9,727.27	9,679.19	48.08	202.299				
6,300.00	6,228.15	3,539.01	2,752.27	26.05	39.46	-41.33	832.92	9,828.07	9,748.65	9,700.28	48.37	201.562				
6,370.81	6,298.03	3,539.01	2,752.27	26.35	39.46	-41.33	832.92	9,828.07	9,764.38	9,715.82	48.56	201.069				
6,400.00	6,326.74	3,539.01	2,752.27	26.48	39.46	-33.80	832.92	9,828.07	9,770.36	9,721.71	48.64	200.855				
6,450.00	6,375.33	3,539.01	2,752.27	26.73	39.46	-26.16	832.92	9,828.07	9,777.74	9,728.95	48.79	200.405				
6,500.00	6,422.93	3,539.01	2,752.27	26.99	39.46	-21.79	832.92	9,828.07	9,781.51	9,732.56	48.94	199.851				
6,550.00	6,469.25	3,539.01	2,752.27	27.29	39.46	-19.03	832.92	9,828.07	9,781.62	9,732.52	49.11	199.196				
6,600.00	6,513.99	3,539.01	2,752.27	27.61	39.46	-17.17	832.92	9,828.07	9,778.09	9,728.82	49.27	198.449				
6,650.00	6,556.88	3,539.01	2,752.27	27.96	39.46	-15.87	832.92	9,828.07	9,770.93	9,721.49	49.44	197.617				
6,700.00	6,597.66	3,539.01	2,752.27	28.34	39.46	-14.95	832.92	9,828.07	9,760.18	9,710.56	49.62	196.706				
6,750.00	6,636.07	3,539.01	2,752.27	28.76	39.46	-14.31	832.92	9,828.07	9,745.89	9,696.09	49.79	195.725				
6,800.00	6,671.88	3,539.01	2,752.27	29.21	39.46	-13.88	832.92	9,828.07	9,728.13	9,678.16	49.97	194.681				
6,850.00	6,704.87	3,539.01	2,752.27	29.71	39.46	-13.63	832.92	9,828.07	9,707.00	9,656.86	50.14	193.581				
6,900.00	6,734.84	3,539.01	2,752.27	30.25	39.46	-13.54	832.92	9,828.07	9,682.61	9,632.29	50.32	192.434				
6,950.00	6,761.59	3,539.01	2,752.27	30.85	39.46	-13.60	832.92	9,828.07	9,655.07	9,604.59	50.49	191.246				
7,000.00	6,784.97	3,539.01	2,752.27	31.50	39.46	-13.82	832.92	9,828.07	9,624.54	9,573.89	50.65	190.025				
7,050.00	6,804.83	3,539.01	2,752.27	32.20	39.46	-14.19	832.92	9,828.07	9,591.17	9,540.37	50.81	188.779				
7,100.00	6,821.05	3,539.01	2,752.27	32.96	39.46	-14.76	832.92	9,828.07	9,555.15	9,504.19	50.96	187.515				
7,150.00	6,833.53	3,539.01	2,752.27	33.77	39.46	-15.56	832.92	9,828.07	9,516.66	9,465.56	51.10	186.240				
7,200.00	6,842.18	3,539.01	2,752.27	34.62	39.46	-16.66	832.92	9,828.07	9,475.91	9,424.68	51.23	184.959				
7,250.00	6,846.97	3,539.01	2,752.27	35.52	39.46	-18.17	832.92	9,828.07	9,433.14	9,381.78	51.36	183.679				
7,286.15	6,848.00	3,539.01	2,752.27	36.18	39.46	-19.63	832.92	9,828.07	9,401.07	9,349.63	51.44	182.755				
7,300.00	6,848.00	3,539.01	2,752.27	36.44	39.46	-19.63	832.92	9,828.07	9,388.63	9,337.15	51.47	182.400				
7,400.00	6,848.03	3,539.01	2,752.27	38.40	39.46	-19.63	832.92	9,828.07	9,298.86	9,247.16	51.69	179.886				
7,500.00	6,848.05	3,539.01	2,752.27	40.49	39.46	-19.63	832.92	9,828.07	9,209.30	9,157.37	51.93	177.348				
7,600.00	6,848.08	3,539.01	2,752.27	42.70	39.46	-19.63	832.92	9,828.07	9,119.96	9,067.78	52.18	174.789				
7,700.00	6,848.10	3,539.01	2,752.27	45.01	39.46	-19.63	832.92	9,828.07	9,030.84	8,978.40	52.44	172.209				
7,800.00	6,848.12	3,539.01	2,752.27	47.40	39.46	-19.63	832.92	9,828.07	8,941.95	8,889.23	52.72	169.610				
7,900.00	6,848.15	3,539.01	2,752.27	49.86	39.46	-19.63	832.92	9,828.07	8,853.30	8,800.29	53.02	166.993				
8,000.00	6,848.17	3,539.01	2,752.27	52.39	39.46	-19.63	832.92	9,828.07	8,764.90	8,711.57	53.33	164.361				
8,100.00	6,848.20	3,539.01	2,752.27	54.96	39.46	-19.63	832.92	9,828.07	8,676.74	8,623.09	53.65	161.714				
8,200.00	6,848.22	3,539.01	2,752.27	57.58	39.46	-19.63	832.92	9,828.07	8,588.85	8,534.85	54.00	159.055				
8,300.00	6,848.25	3,539.01	2,752.27	60.24	39.46	-19.63	832.92	9,828.07	8,501.22	8,446.86	54.36	156.385				
8,400.00	6,848.27	3,539.01	2,752.27	62.94	39.46	-19.63	832.92	9,828.07	8,413.87	8,359.13	54.74	153.706				
8,500.00	6,848.29	3,539.01	2,752.27	65.66	39.46	-19.63	832.92	9,828.07	8,326.80	8,271.67	55.14	151.020				
8,600.00	6,848.32	3,539.01	2,752.27	68.42	39.46	-19.63	832.92	9,828.07	8,240.03	8,184.48	55.55	148.329				
8,700.00	6,848.34	3,539.01	2,752.27	71.19	39.46	-19.63	832.92	9,828.07	8,153.56	8,097.57	55.99	145.635				
8,800.00	6,848.37	3,539.01	2,752.27	73.99	39.46	-19.63	832.92	9,828.07	8,067.40	8,010.97	56.44	142.940				
8,900.00	6,848.39	3,539.01	2,752.27	76.80	39.46	-19.63	832.92	9,828.07	7,981.57	7,924.66	56.91	140.247				
9,000.00	6,848.42	3,539.01	2,752.27	79.63	39.46	-19.63	832.92	9,828.07	7,896.07	7,838.67	57.40	137.556				

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit Com 138H - Pilot - Pilot												Offset Site Error:	0.00 ft
Survey Program: 575-MWD+HDGM												Offset Well Error:	0.00 ft
Reference												Rule Assigned:	
Offset												Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (ft)	Separation Factor	
							+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)			
9,100.00	6,848.44	3,539.01	2,752.27	82.47	39.46	-19.63	832.92	9,828.07	7,810.91	7,753.00	57.91	134.871	
9,200.00	6,848.46	3,539.01	2,752.27	85.33	39.46	-19.63	832.92	9,828.07	7,726.11	7,667.67	58.45	132.192	
9,300.00	6,848.49	3,539.01	2,752.27	88.20	39.46	-19.63	832.92	9,828.07	7,641.68	7,582.68	59.00	129.523	
9,400.00	6,848.51	3,539.01	2,752.27	91.08	39.46	-19.63	832.92	9,828.07	7,557.63	7,498.05	59.57	126.865	
9,500.00	6,848.54	3,539.01	2,752.27	93.97	39.46	-19.63	832.92	9,828.07	7,473.96	7,413.80	60.17	124.221	
9,600.00	6,848.56	3,539.01	2,752.27	96.87	39.46	-19.63	832.92	9,828.07	7,390.71	7,329.93	60.78	121.591	
9,700.00	6,848.58	3,539.01	2,752.27	99.77	39.46	-19.63	832.92	9,828.07	7,307.88	7,246.45	61.42	118.979	
9,800.00	6,848.61	3,539.01	2,752.27	102.69	39.46	-19.63	832.92	9,828.07	7,225.47	7,163.39	62.08	116.386	
9,900.00	6,848.63	3,539.01	2,752.27	105.61	39.46	-19.63	832.92	9,828.07	7,143.52	7,080.76	62.77	113.813	
10,000.00	6,848.66	3,539.01	2,752.27	108.53	39.46	-19.63	832.92	9,828.07	7,062.04	6,998.57	63.47	111.263	
10,100.00	6,848.68	3,539.01	2,752.27	111.46	39.46	-19.63	832.92	9,828.07	6,981.03	6,916.83	64.20	108.738	
10,200.00	6,848.71	3,539.01	2,752.27	114.40	39.46	-19.63	832.92	9,828.07	6,900.53	6,835.57	64.95	106.238	
10,300.00	6,848.73	3,539.01	2,752.27	117.34	39.46	-19.63	832.92	9,828.07	6,820.54	6,754.81	65.73	103.766	
10,400.00	6,848.75	3,539.01	2,752.27	120.29	39.46	-19.63	832.92	9,828.07	6,741.08	6,674.55	66.53	101.324	
10,500.00	6,848.78	3,539.01	2,752.27	123.24	39.46	-19.63	832.92	9,828.07	6,662.18	6,594.82	67.36	98.911	
10,600.00	6,848.80	3,539.01	2,752.27	126.20	39.46	-19.63	832.92	9,828.07	6,583.85	6,515.64	68.20	96.531	
10,700.00	6,848.83	3,539.01	2,752.27	129.16	39.46	-19.63	832.92	9,828.07	6,506.11	6,437.04	69.08	94.184	
10,800.00	6,848.85	3,539.01	2,752.27	132.12	39.46	-19.63	832.92	9,828.07	6,428.99	6,359.02	69.98	91.872	
10,900.00	6,848.88	3,539.01	2,752.27	135.08	39.46	-19.63	832.92	9,828.07	6,352.51	6,281.61	70.90	89.596	
11,000.00	6,848.90	3,539.01	2,752.27	138.05	39.46	-19.63	832.92	9,828.07	6,276.69	6,204.84	71.85	87.356	
11,100.00	6,848.92	3,539.01	2,752.27	141.02	39.46	-19.63	832.92	9,828.07	6,201.56	6,128.73	72.83	85.155	
11,200.00	6,848.95	3,539.01	2,752.27	144.00	39.46	-19.63	832.92	9,828.07	6,127.13	6,053.31	73.83	82.992	
11,300.00	6,848.97	3,539.01	2,752.27	146.97	39.46	-19.63	832.92	9,828.07	6,053.45	5,978.59	74.85	80.870	
11,400.00	6,849.00	3,539.01	2,752.27	149.95	39.46	-19.63	832.92	9,828.07	5,980.52	5,904.62	75.91	78.788	
11,500.00	6,849.02	3,539.01	2,752.27	152.93	39.46	-19.63	832.92	9,828.07	5,908.39	5,831.41	76.98	76.748	
11,600.00	6,849.04	3,539.01	2,752.27	155.91	39.46	-19.63	832.92	9,828.07	5,837.08	5,759.00	78.09	74.750	
11,700.00	6,849.07	3,539.01	2,752.27	158.90	39.46	-19.63	832.92	9,828.07	5,766.63	5,687.41	79.22	72.795	
11,800.00	6,849.09	3,539.01	2,752.27	161.88	39.46	-19.63	832.92	9,828.07	5,697.06	5,616.68	80.37	70.883	
11,899.84	6,849.12	3,539.01	2,752.27	164.86	39.46	-19.63	832.92	9,828.07	5,628.51	5,546.96	81.55	69.019	
11,900.00	6,849.12	3,539.01	2,752.27	164.87	39.46	-19.63	832.92	9,828.07	5,628.40	5,546.85	81.55	69.015	
11,999.40	6,849.14	3,539.01	2,752.27	167.84	39.46	-19.63	832.92	9,828.07	5,561.10	5,478.35	82.75	67.203	
12,000.00	6,849.14	3,539.01	2,752.27	167.86	39.46	-19.63	832.92	9,828.07	5,560.70	5,477.94	82.76	67.192	
12,098.96	6,849.17	3,539.01	2,752.27	170.82	39.46	-19.63	832.92	9,828.07	5,494.66	5,410.69	83.97	65.433	
12,100.00	6,849.17	3,539.01	2,752.27	170.85	39.46	-19.63	832.92	9,828.07	5,493.98	5,409.99	83.99	65.414	
12,198.52	6,849.19	3,539.01	2,752.27	173.80	39.46	-19.63	832.92	9,828.07	5,429.25	5,344.02	85.22	63.707	
12,200.00	6,849.19	3,539.01	2,752.27	173.84	39.46	-19.63	832.92	9,828.07	5,428.28	5,343.04	85.24	63.681	
12,298.07	6,849.21	3,539.01	2,752.27	176.78	39.46	-19.63	832.92	9,828.07	5,364.88	5,278.39	86.49	62.026	
12,300.00	6,849.21	3,539.01	2,752.27	176.84	39.46	-19.63	832.92	9,828.07	5,363.65	5,277.13	86.52	61.994	
12,397.62	6,849.24	3,539.01	2,752.27	179.76	39.46	-19.63	832.92	9,828.07	5,301.60	5,213.82	87.79	60.391	
12,400.00	6,849.24	3,539.01	2,752.27	179.83	39.46	-19.63	832.92	9,828.07	5,300.11	5,212.29	87.82	60.353	
12,497.17	6,849.26	3,539.01	2,752.27	182.74	39.46	-19.63	832.92	9,828.07	5,239.46	5,150.36	89.10	58.802	
12,500.00	6,849.26	3,539.01	2,752.27	182.83	39.46	-19.63	832.92	9,828.07	5,237.71	5,148.57	89.14	58.757	
12,596.70	6,849.29	3,539.01	2,752.27	185.72	39.46	-19.63	832.92	9,828.07	5,178.49	5,088.05	90.44	57.259	
12,600.00	6,849.29	3,539.01	2,752.27	185.82	39.46	-19.63	832.92	9,828.07	5,176.49	5,086.00	90.49	57.208	
12,696.24	6,849.31	3,539.01	2,752.27	188.71	39.46	-19.63	832.92	9,828.07	5,118.73	5,026.93	91.80	55.761	
12,700.00	6,849.31	3,539.01	2,752.27	188.82	39.46	-19.63	832.92	9,828.07	5,116.49	5,024.64	91.85	55.705	
12,795.76	6,849.33	3,539.01	2,752.27	191.69	39.46	-19.63	832.92	9,828.07	5,060.22	4,967.05	93.17	54.310	
12,800.00	6,849.34	3,539.01	2,752.27	191.82	39.46	-19.63	832.92	9,828.07	5,057.76	4,964.53	93.23	54.249	
12,895.29	6,849.36	3,539.01	2,752.27	194.68	39.46	-19.63	832.92	9,828.07	5,003.02	4,908.45	94.57	52.904	
12,900.00	6,849.36	3,539.01	2,752.27	194.82	39.46	-19.63	832.92	9,828.07	5,000.34	4,905.70	94.63	52.839	
12,994.80	6,849.38	3,539.01	2,752.27	197.67	39.46	-19.63	832.92	9,828.07	4,947.15	4,851.18	95.98	51.545	
13,000.00	6,849.38	3,539.01	2,752.27	197.82	39.46	-19.63	832.92	9,828.07	4,944.27	4,848.22	96.05	51.475	

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit Com 138H - Pilot - Pilot												Offset Site Error:	0.00 ft
Survey Program: 575-MWD+HDGM												Offset Well Error:	0.00 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Distance Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
13,094.31	6,849.41	3,539.01	2,752.27	200.66	39.46	-19.63	832.92	9,828.07	4,892.68	4,795.28	97.40	50.231	
13,100.00	6,849.41	3,539.01	2,752.27	200.83	39.46	-19.63	832.92	9,828.07	4,889.61	4,792.12	97.49	50.158	
13,193.81	6,849.43	3,539.01	2,752.27	203.64	39.46	-19.63	832.92	9,828.07	4,839.65	4,740.81	98.84	48.964	
13,200.00	6,849.43	3,539.01	2,752.27	203.83	39.46	-19.63	832.92	9,828.07	4,836.40	4,737.46	98.93	48.886	
13,293.30	6,849.45	3,539.01	2,752.27	206.63	39.46	-19.63	832.92	9,828.07	4,788.10	4,687.80	100.29	47.742	
13,300.00	6,849.46	3,539.01	2,752.27	206.83	39.46	-19.63	832.92	9,828.07	4,784.68	4,684.29	100.39	47.661	
13,392.79	6,849.48	3,539.01	2,752.27	209.62	39.46	-19.63	832.92	9,828.07	4,738.08	4,636.33	101.75	46.565	
13,400.00	6,849.48	3,539.01	2,752.27	209.84	39.46	-19.63	832.92	9,828.07	4,734.51	4,632.66	101.86	46.482	
13,492.27	6,849.50	3,539.01	2,752.27	212.61	39.46	-19.63	832.92	9,828.07	4,689.64	4,586.42	103.22	45.435	
13,500.00	6,849.50	3,539.01	2,752.27	212.84	39.46	-19.63	832.92	9,828.07	4,685.94	4,582.61	103.33	45.349	
13,591.74	6,849.53	3,539.01	2,752.27	215.60	39.46	-19.63	832.92	9,828.07	4,642.83	4,538.14	104.69	44.349	
13,600.00	6,849.53	3,539.01	2,752.27	215.85	39.46	-19.63	832.92	9,828.07	4,639.02	4,534.21	104.81	44.261	
13,691.20	6,849.55	3,539.01	2,752.27	218.59	39.46	-19.63	832.92	9,828.07	4,597.71	4,491.54	106.16	43.308	
13,700.00	6,849.55	3,539.01	2,752.27	218.86	39.46	-19.63	832.92	9,828.07	4,593.80	4,487.50	106.29	43.218	
13,790.66	6,849.58	3,539.01	2,752.27	221.59	39.46	-19.63	832.92	9,828.07	4,554.31	4,446.67	107.64	42.312	
13,800.00	6,849.58	3,539.01	2,752.27	221.87	39.46	-19.63	832.92	9,828.07	4,550.32	4,442.54	107.78	42.220	
13,890.10	6,849.60	3,539.01	2,752.27	224.58	39.46	-19.63	832.92	9,828.07	4,512.69	4,403.58	109.11	41.359	
13,900.00	6,849.60	3,539.01	2,752.27	224.87	39.46	-19.63	832.92	9,828.07	4,508.64	4,399.39	109.26	41.267	
13,989.54	6,849.62	3,539.01	2,752.27	227.57	39.46	-19.63	832.92	9,828.07	4,472.89	4,362.32	110.57	40.451	
14,000.00	6,849.63	3,539.01	2,752.27	227.88	39.46	-19.63	832.92	9,828.07	4,468.81	4,358.09	110.73	40.358	
14,088.97	6,849.65	3,539.01	2,752.27	230.56	39.46	-19.63	832.92	9,828.07	4,434.98	4,322.94	112.03	39.587	
14,100.00	6,849.65	3,539.01	2,752.27	230.89	39.46	-19.63	832.92	9,828.07	4,430.89	4,318.69	112.19	39.494	
14,188.39	6,849.67	3,539.01	2,752.27	233.55	39.46	-19.63	832.92	9,828.07	4,398.98	4,285.51	113.48	38.765	
14,200.00	6,849.67	3,539.01	2,752.27	233.90	39.46	-19.63	832.92	9,828.07	4,394.91	4,281.26	113.64	38.672	
14,287.80	6,849.70	3,539.01	2,752.27	236.55	39.46	-19.63	832.92	9,828.07	4,364.96	4,250.05	114.91	37.987	
14,300.00	6,849.70	3,539.01	2,752.27	236.92	39.46	-19.63	832.92	9,828.07	4,360.92	4,245.84	115.08	37.894	
14,387.20	6,849.72	3,539.01	2,752.27	239.54	39.46	-19.63	832.92	9,828.07	4,332.96	4,216.64	116.32	37.250	
14,400.00	6,849.72	3,539.01	2,752.27	239.93	39.46	-19.63	832.92	9,828.07	4,328.98	4,212.48	116.50	37.159	
14,486.60	6,849.74	3,539.01	2,752.27	242.54	39.46	-19.63	832.92	9,828.07	4,303.01	4,185.30	117.71	36.556	
14,500.00	6,849.75	3,539.01	2,752.27	242.94	39.46	-19.63	832.92	9,828.07	4,299.13	4,181.24	117.90	36.466	
14,585.98	6,849.77	3,539.01	2,752.27	245.53	39.46	-19.63	832.92	9,828.07	4,275.17	4,156.10	119.08	35.903	
14,600.00	6,849.77	3,539.01	2,752.27	245.95	39.46	-19.63	832.92	9,828.07	4,271.42	4,152.15	119.27	35.814	
14,685.36	6,849.79	3,539.01	2,752.27	248.52	39.46	-19.63	832.92	9,828.07	4,249.48	4,129.06	120.41	35.291	
14,700.00	6,849.80	3,539.01	2,752.27	248.96	39.46	-19.63	832.92	9,828.07	4,245.87	4,125.27	120.61	35.204	
14,784.73	6,849.82	3,539.01	2,752.27	251.52	39.46	-19.63	832.92	9,828.07	4,225.96	4,104.24	121.72	34.719	
14,800.00	6,849.82	3,539.01	2,752.27	251.98	39.46	-19.63	832.92	9,828.07	4,222.55	4,100.63	121.92	34.635	
14,884.10	6,849.84	3,539.01	2,752.27	254.51	39.46	-19.63	832.92	9,828.07	4,204.67	4,081.68	122.99	34.187	
14,900.00	6,849.84	3,539.01	2,752.27	254.99	39.46	-19.63	832.92	9,828.07	4,201.47	4,078.28	123.19	34.105	
14,983.46	6,849.86	3,539.01	2,752.27	257.51	39.46	-19.63	832.92	9,828.07	4,185.63	4,061.40	124.22	33.694	
15,000.00	6,849.87	3,539.01	2,752.27	258.01	39.46	-19.63	832.92	9,828.07	4,182.68	4,058.25	124.43	33.616	
15,082.81	6,849.89	3,539.01	2,752.27	260.50	39.46	-19.63	832.92	9,828.07	4,168.87	4,043.45	125.42	33.240	
15,100.00	6,849.89	3,539.01	2,752.27	261.02	39.46	-19.63	832.92	9,828.07	4,166.20	4,040.58	125.62	33.165	
15,182.17	6,849.91	3,539.01	2,752.27	263.50	39.46	-19.63	832.92	9,828.07	4,154.42	4,027.85	126.57	32.824	
15,200.00	6,849.92	3,539.01	2,752.27	264.04	39.46	-19.63	832.92	9,828.07	4,152.07	4,025.30	126.77	32.753	
15,281.52	6,849.94	3,539.01	2,752.27	266.49	39.46	-19.63	832.92	9,828.07	4,142.30	4,014.63	127.67	32.446	
15,300.00	6,849.94	3,539.01	2,752.27	267.05	39.46	-19.63	832.92	9,828.07	4,140.31	4,012.44	127.87	32.379	
15,380.87	6,849.96	3,539.01	2,752.27	269.49	39.46	-19.63	832.92	9,828.07	4,132.54	4,003.81	128.72	32.104	
15,400.00	6,849.97	3,539.01	2,752.27	270.07	39.46	-19.63	832.92	9,828.07	4,130.93	4,002.01	128.92	32.042	
15,480.22	6,849.98	3,539.01	2,752.27	272.49	39.46	-19.63	832.92	9,828.07	4,125.15	3,995.42	129.73	31.799	
15,500.00	6,849.99	3,539.01	2,752.27	273.08	39.46	-19.63	832.92	9,828.07	4,123.96	3,994.04	129.92	31.742	
15,579.58	6,850.01	3,539.01	2,752.27	275.48	39.46	-19.63	832.92	9,828.07	4,120.14	3,989.46	130.68	31.529	
15,600.00	6,850.01	3,539.01	2,752.27	276.10	39.46	-19.63	832.92	9,828.07	4,119.40	3,988.54	130.87	31.478	

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit Com 138H - Pilot - Pilot													Offset Site Error:	0.00 ft
Survey Program:		575-MWD+HDGM						Rule Assigned:					Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (ft)	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
15,678.94	6,850.03	3,539.01	2,752.27	278.48	39.46	-19.63	832.92	9,828.07	4,117.52	3,985.94	131.58	31.294		
15,700.00	6,850.04	3,539.01	2,752.27	279.12	39.46	-19.63	832.92	9,828.07	4,117.27	3,985.51	131.76	31.249		
15,737.70	6,850.05	3,539.01	2,752.27	280.26	39.46	-19.63	832.92	9,828.07	4,117.10	3,985.02	132.08	31.171	CC	
15,800.00	6,850.06	3,539.01	2,752.27	282.14	39.46	-19.63	832.92	9,828.07	4,117.57	3,984.98	132.59	31.054	ES	
15,822.09	6,850.07	3,539.01	2,752.27	282.80	39.46	-19.63	832.92	9,828.07	4,117.96	3,985.19	132.77	31.016		
15,900.00	6,850.09	3,539.01	2,752.27	285.15	39.46	-19.63	832.92	9,828.07	4,120.29	3,986.92	133.37	30.894		
16,000.00	6,850.11	3,539.01	2,752.27	288.17	39.46	-19.63	832.92	9,828.07	4,125.44	3,991.35	134.09	30.767		
16,100.00	6,850.13	3,539.01	2,752.27	291.19	39.46	-19.63	832.92	9,828.07	4,133.00	3,998.26	134.75	30.672		
16,200.00	6,850.16	3,539.01	2,752.27	294.21	39.46	-19.63	832.92	9,828.07	4,142.97	4,007.62	135.35	30.609		
16,300.00	6,850.18	3,539.01	2,752.27	297.23	39.46	-19.63	832.92	9,828.07	4,155.31	4,019.42	135.89	30.578		
16,400.00	6,850.21	3,539.01	2,752.27	300.25	39.46	-19.63	832.92	9,828.07	4,170.02	4,033.64	136.38	30.577	SF	
16,500.00	6,850.23	3,539.01	2,752.27	303.27	39.46	-19.63	832.92	9,828.07	4,187.06	4,050.26	136.81	30.605		
16,600.00	6,850.26	3,539.01	2,752.27	306.28	39.46	-19.63	832.92	9,828.07	4,206.42	4,069.24	137.18	30.663		
16,700.00	6,850.28	3,539.01	2,752.27	309.30	39.46	-19.63	832.92	9,828.07	4,228.05	4,090.55	137.50	30.749		
16,800.00	6,850.30	3,539.01	2,752.27	312.32	39.46	-19.63	832.92	9,828.07	4,251.92	4,114.16	137.77	30.863		
16,900.00	6,850.33	3,539.01	2,752.27	315.35	39.46	-19.63	832.92	9,828.07	4,278.00	4,140.02	137.98	31.004		
17,000.00	6,850.35	3,539.01	2,752.27	318.37	39.46	-19.63	832.92	9,828.07	4,306.25	4,168.10	138.15	31.171		
17,100.00	6,850.38	3,065.74	2,571.38	321.39	27.77	-16.06	618.72	10,208.61	4,336.25	4,211.47	124.78	34.752		
17,200.00	6,850.40	3,031.01	2,559.50	324.41	26.91	-15.78	600.75	10,235.85	4,359.61	4,235.56	124.04	35.145		
17,300.00	6,850.43	3,031.01	2,559.50	327.43	26.91	-15.78	600.75	10,235.85	4,384.88	4,260.54	124.34	35.266		
17,400.00	6,850.45	2,994.34	2,546.32	330.45	26.03	-15.48	581.85	10,264.37	4,411.55	4,288.05	123.50	35.720		
17,500.00	6,850.47	2,970.01	2,537.00	333.47	25.45	-15.29	569.56	10,283.19	4,440.29	4,317.27	123.02	36.094		
17,600.00	6,850.50	2,970.01	2,537.00	336.49	25.45	-15.29	569.56	10,283.19	4,470.76	4,347.56	123.20	36.288		
17,700.00	6,850.52	2,909.01	2,512.56	339.52	24.01	-14.81	539.44	10,330.27	4,502.63	4,380.96	121.67	37.006		
17,800.00	6,850.55	2,884.10	2,502.31	342.54	23.44	-14.62	527.31	10,349.46	4,535.92	4,414.78	121.14	37.444		
17,900.00	6,850.57	2,847.01	2,486.81	345.56	22.58	-14.33	509.23	10,377.90	4,570.56	4,450.30	120.26	38.005		
18,000.00	6,850.59	2,847.01	2,486.81	348.58	22.58	-14.33	509.23	10,377.90	4,606.81	4,486.48	120.33	38.286		
18,100.00	6,850.62	2,820.20	2,475.17	351.61	21.98	-14.12	496.34	10,398.32	4,644.48	4,524.79	119.69	38.805		
18,200.00	6,850.64	2,786.01	2,459.38	354.63	21.22	-13.87	480.45	10,424.14	4,684.15	4,565.28	118.87	39.406		
18,300.00	6,850.67	2,786.01	2,459.38	357.65	21.22	-13.87	480.45	10,424.14	4,724.90	4,606.05	118.85	39.756		
18,400.00	6,850.69	2,786.01	2,459.38	360.67	21.22	-13.87	480.45	10,424.14	4,767.39	4,648.60	118.79	40.133		
18,500.00	6,850.72	2,786.01	2,459.38	363.70	21.22	-13.87	480.45	10,424.14	4,811.59	4,692.89	118.70	40.535		
18,600.00	6,850.74	2,755.99	2,444.65	366.72	20.58	-13.64	466.88	10,446.50	4,856.89	4,738.97	117.93	41.186		
18,700.00	6,850.76	2,725.01	2,428.60	369.75	19.92	-13.41	453.11	10,469.14	4,904.04	4,786.91	117.13	41.870		
18,800.00	6,850.79	2,725.01	2,428.60	372.77	19.92	-13.41	453.11	10,469.14	4,952.17	4,835.20	116.97	42.337		
18,900.00	6,850.81	2,725.01	2,428.60	375.79	19.92	-13.41	453.11	10,469.14	5,001.84	4,885.05	116.79	42.827		
19,000.00	6,850.84	2,700.67	2,415.49	378.82	19.43	-13.24	442.49	10,486.69	5,052.76	4,936.65	116.10	43.520		
19,100.00	6,850.86	2,664.01	2,395.14	381.84	18.69	-12.97	426.89	10,512.89	5,105.06	4,989.88	115.18	44.324		
19,200.00	6,850.89	2,664.01	2,395.14	384.87	18.69	-12.97	426.89	10,512.89	5,158.23	5,043.28	114.95	44.874		
19,300.00	6,850.91	2,664.01	2,395.14	387.89	18.69	-12.97	426.89	10,512.89	5,212.77	5,098.07	114.70	45.447		
19,400.00	6,850.93	2,602.01	2,359.46	390.91	17.48	-12.54	401.45	10,556.75	5,268.21	5,154.86	113.35	46.477		
19,500.00	6,850.96	2,602.01	2,359.46	393.94	17.48	-12.54	401.45	10,556.75	5,324.56	5,211.48	113.08	47.085		
19,600.00	6,850.98	2,577.62	2,345.06	396.96	17.02	-12.38	391.73	10,573.86	5,381.99	5,269.58	112.41	47.880		
19,673.90	6,851.00	2,562.83	2,336.22	399.20	16.75	-12.28	385.91	10,584.19	5,425.06	5,313.10	111.96	48.455		
19,700.00	6,851.01	2,541.01	2,323.01	399.99	16.34	-12.14	377.44	10,599.36	5,440.49	5,328.94	111.55	48.773		
19,773.90	6,851.02	2,541.01	2,323.01	402.22	16.34	-12.14	377.44	10,599.36	5,484.17	5,372.84	111.33	49.260		

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit Com 138H - ST #2 - ST #2												Offset Site Error:	0.00 ft
Survey Program: 575-MWD+HDGM, 2974-MWD+HDGM												Offset Well Error:	0.00 ft
Reference	Offset	Semi Major Axis	Rule Assigned:										
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Highside Toolface (°)	Offset Wellbore Centre	Distance	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.00	0.00	6,293.01	2,535.93	0.00	94.88	69.57	2,990.66	8,029.61	9,000.77				
100.00	100.00	6,293.01	2,535.93	0.30	94.88	69.57	2,990.66	8,029.61	8,970.65	8,886.17	84.49	106.180	
200.00	200.00	6,293.01	2,535.93	0.66	94.88	69.57	2,990.66	8,029.61	8,941.56	8,856.66	84.90	105.320	
300.00	300.00	6,293.01	2,535.93	1.01	94.88	69.57	2,990.66	8,029.61	8,913.49	8,828.10	85.39	104.388	
400.00	400.00	6,293.01	2,535.93	1.37	94.88	69.57	2,990.66	8,029.61	8,886.45	8,800.54	85.91	103.439	
500.00	500.00	6,293.01	2,535.93	1.73	94.88	69.57	2,990.66	8,029.61	8,860.47	8,774.02	86.45	102.497	
600.00	599.98	6,293.01	2,535.93	2.08	94.88	-55.59	2,990.66	8,029.61	8,834.57	8,747.59	86.99	101.564	
700.00	699.84	6,293.01	2,535.93	2.42	94.88	-56.05	2,990.66	8,029.61	8,807.83	8,720.30	87.53	100.625	
800.00	799.45	6,293.01	2,535.93	2.77	94.88	-56.52	2,990.66	8,029.61	8,780.26	8,692.17	88.09	99.674	
900.00	898.70	6,293.01	2,535.93	3.13	94.88	-57.02	2,990.66	8,029.61	8,751.90	8,663.23	88.66	98.711	
963.97	961.95	6,293.01	2,535.93	3.37	94.88	-57.34	2,990.66	8,029.61	8,733.34	8,644.31	89.04	98.086	
1,000.00	997.50	6,293.01	2,535.93	3.51	94.88	-57.34	2,990.66	8,029.61	8,722.88	8,633.63	89.25	97.735	
1,100.00	1,096.19	6,293.01	2,535.93	3.90	94.88	-57.34	2,990.66	8,029.61	8,694.54	8,604.70	89.84	96.782	
1,200.00	1,194.89	6,293.01	2,535.93	4.30	94.88	-57.34	2,990.66	8,029.61	8,667.26	8,576.83	90.42	95.850	
1,300.00	1,293.58	6,293.01	2,535.93	4.70	94.88	-57.34	2,990.66	8,029.61	8,641.05	8,550.04	91.01	94.943	
1,400.00	1,392.27	6,293.01	2,535.93	5.11	94.88	-57.34	2,990.66	8,029.61	8,615.92	8,524.32	91.60	94.061	
1,500.00	1,490.96	6,293.01	2,535.93	5.52	94.88	-57.34	2,990.66	8,029.61	8,591.89	8,499.70	92.18	93.205	
1,600.00	1,589.65	6,293.01	2,535.93	5.94	94.88	-57.34	2,990.66	8,029.61	8,568.95	8,476.19	92.76	92.377	
1,700.00	1,688.34	6,293.01	2,535.93	6.36	94.88	-57.34	2,990.66	8,029.61	8,547.12	8,453.79	93.33	91.575	
1,800.00	1,787.03	6,293.01	2,535.93	6.78	94.88	-57.34	2,990.66	8,029.61	8,526.41	8,432.51	93.90	90.801	
1,900.00	1,885.73	6,293.01	2,535.93	7.20	94.88	-57.34	2,990.66	8,029.61	8,506.83	8,412.36	94.46	90.055	
2,000.00	1,984.42	6,293.01	2,535.93	7.62	94.88	-57.34	2,990.66	8,029.61	8,488.37	8,393.36	95.02	89.337	
2,100.00	2,083.11	6,293.01	2,535.93	8.04	94.88	-57.34	2,990.66	8,029.61	8,471.06	8,375.50	95.56	88.647	
2,200.00	2,181.80	6,293.01	2,535.93	8.46	94.88	-57.34	2,990.66	8,029.61	8,454.90	8,358.80	96.10	87.984	
2,300.00	2,280.49	6,293.01	2,535.93	8.89	94.88	-57.34	2,990.66	8,029.61	8,439.89	8,343.26	96.62	87.348	
2,400.00	2,379.18	6,293.01	2,535.93	9.31	94.88	-57.34	2,990.66	8,029.61	8,426.04	8,328.89	97.14	86.740	
2,500.00	2,477.87	6,293.01	2,535.93	9.74	94.88	-57.34	2,990.66	8,029.61	8,413.35	8,315.70	97.65	86.159	
2,600.00	2,576.56	6,293.01	2,535.93	10.16	94.88	-57.34	2,990.66	8,029.61	8,401.84	8,303.69	98.15	85.605	
2,700.00	2,675.26	6,293.01	2,535.93	10.59	94.88	-57.34	2,990.66	8,029.61	8,391.50	8,292.87	98.63	85.078	
2,800.00	2,773.95	6,293.01	2,535.93	11.02	94.88	-57.34	2,990.66	8,029.61	8,382.34	8,283.23	99.11	84.577	
2,900.00	2,872.64	6,293.01	2,535.93	11.44	94.88	-57.34	2,990.66	8,029.61	8,374.37	8,274.79	99.57	84.103	
3,000.00	2,971.33	6,293.01	2,535.93	11.87	94.88	-57.34	2,990.66	8,029.61	8,367.58	8,267.56	100.03	83.654	
3,100.00	3,070.02	6,293.01	2,535.93	12.30	94.88	-57.34	2,990.66	8,029.61	8,361.99	8,261.52	100.47	83.231	
3,200.00	3,168.71	6,293.01	2,535.93	12.73	94.88	-57.34	2,990.66	8,029.61	8,357.58	8,256.69	100.90	82.834	
3,300.00	3,267.40	6,293.01	2,535.93	13.16	94.88	-57.34	2,990.66	8,029.61	8,354.38	8,253.07	101.31	82.462	
3,400.00	3,366.10	6,293.01	2,535.93	13.58	94.88	-57.34	2,990.66	8,029.61	8,352.37	8,250.65	101.72	82.115	
3,500.00	3,464.79	6,293.01	2,535.93	14.01	94.88	-57.34	2,990.66	8,029.61	8,351.55	8,249.45	102.11	81.793	
3,518.03	3,482.58	6,293.01	2,535.93	14.09	94.88	-57.34	2,990.66	8,029.61	8,351.53	8,249.36	102.18	81.737	
3,600.00	3,563.48	6,293.01	2,535.93	14.44	94.88	-57.34	2,990.66	8,029.61	8,351.93	8,249.45	102.48	81.495	
3,700.00	3,662.17	6,293.01	2,535.93	14.87	94.88	-57.34	2,990.66	8,029.61	8,353.51	8,250.67	102.85	81.222	
3,800.00	3,760.86	6,293.01	2,535.93	15.30	94.88	-57.34	2,990.66	8,029.61	8,356.29	8,253.09	103.20	80.972	
3,900.00	3,859.55	6,293.01	2,535.93	15.73	94.88	-57.34	2,990.66	8,029.61	8,360.26	8,256.72	103.54	80.746	
4,000.00	3,958.24	6,293.01	2,535.93	16.16	94.88	-57.34	2,990.66	8,029.61	8,365.43	8,261.57	103.86	80.544	
4,100.00	4,056.94	6,293.01	2,535.93	16.59	94.88	-57.34	2,990.66	8,029.61	8,371.78	8,267.61	104.17	80.364	
4,200.00	4,155.63	6,293.01	2,535.93	17.02	94.88	-57.34	2,990.66	8,029.61	8,379.33	8,274.86	104.47	80.208	
4,300.00	4,254.32	6,293.01	2,535.93	17.45	94.88	-57.34	2,990.66	8,029.61	8,388.06	8,283.31	104.75	80.074	
4,400.00	4,353.01	6,293.01	2,535.93	17.88	94.88	-57.34	2,990.66	8,029.61	8,397.97	8,292.95	105.02	79.963	
4,500.00	4,451.70	6,293.01	2,535.93	18.30	94.88	-57.34	2,990.66	8,029.61	8,409.06	8,303.78	105.28	79.874	
4,600.00	4,550.39	6,293.01	2,535.93	18.73	94.88	-57.34	2,990.66	8,029.61	8,421.33	8,315.80	105.52	79.806	
4,700.00	4,649.08	6,293.01	2,535.93	19.16	94.88	-57.34	2,990.66	8,029.61	8,434.76	8,329.01	105.75	79.760	
4,800.00	4,747.77	6,293.01	2,535.93	19.59	94.88	-57.34	2,990.66	8,029.61	8,449.35	8,343.38	105.97	79.736	
4,900.00	4,846.47	6,293.01	2,535.93	20.02	94.88	-57.34	2,990.66	8,029.61	8,465.10	8,358.93	106.17	79.732	

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit Com 138H - ST #2 - ST #2													Offset Site Error:	0.00 ft	
Survey Program:		575-MWD+HDGM, 2974-MWD+HDGM					Rule Assigned:							Offset Well Error:	0.00 ft
Reference	Offset	Semi Major Axis		Offset Wellbore Centre			Distance				Warning				
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning		
5,000.00	4,945.16	6,293.01	2,535.93	20.45	94.88	-57.34	2,990.66	8,029.61	8,482.00	8,375.64	106.36	79.749			
5,100.00	5,043.85	6,293.01	2,535.93	20.88	94.88	-57.34	2,990.66	8,029.61	8,500.04	8,393.51	106.53	79.787			
5,200.00	5,142.54	6,293.01	2,535.93	21.31	94.88	-57.34	2,990.66	8,029.61	8,519.22	8,412.52	106.70	79.845			
5,300.00	5,241.23	6,293.01	2,535.93	21.74	94.88	-57.34	2,990.66	8,029.61	8,539.53	8,432.68	106.85	79.923			
5,400.00	5,339.92	6,293.01	2,535.93	22.17	94.88	-57.34	2,990.66	8,029.61	8,560.95	8,453.97	106.98	80.021			
5,500.00	5,438.61	6,293.01	2,535.93	22.61	94.88	-57.34	2,990.66	8,029.61	8,583.49	8,476.38	107.11	80.138			
5,600.00	5,537.31	6,293.01	2,535.93	23.04	94.88	-57.34	2,990.66	8,029.61	8,607.13	8,499.91	107.22	80.275			
5,700.00	5,636.00	6,293.01	2,535.93	23.47	94.88	-57.34	2,990.66	8,029.61	8,631.86	8,524.54	107.32	80.430			
5,800.00	5,734.69	6,293.01	2,535.93	23.90	94.88	-57.34	2,990.66	8,029.61	8,657.68	8,550.27	107.41	80.604			
5,900.00	5,833.38	6,293.01	2,535.93	24.33	94.88	-57.34	2,990.66	8,029.61	8,684.58	8,577.09	107.49	80.797			
6,000.00	5,932.07	6,293.01	2,535.93	24.76	94.88	-57.34	2,990.66	8,029.61	8,712.53	8,604.98	107.55	81.008			
6,100.00	6,030.76	6,293.01	2,535.93	25.19	94.88	-57.34	2,990.66	8,029.61	8,741.55	8,633.94	107.61	81.236			
6,200.00	6,129.45	6,293.01	2,535.93	25.62	94.88	-57.34	2,990.66	8,029.61	8,771.60	8,663.95	107.65	81.482			
6,300.00	6,228.15	6,293.01	2,535.93	26.05	94.88	-57.34	2,990.66	8,029.61	8,802.69	8,695.01	107.68	81.746			
6,370.81	6,298.03	6,293.01	2,535.93	26.35	94.88	-57.34	2,990.66	8,029.61	8,825.33	8,717.63	107.70	81.943			
6,400.00	6,326.74	6,293.01	2,535.93	26.48	94.88	-49.55	2,990.66	8,029.61	8,834.22	8,726.51	107.71	82.020			
6,450.00	6,375.33	6,293.01	2,535.93	26.73	94.88	-41.56	2,990.66	8,029.61	8,846.88	8,739.15	107.73	82.119			
6,500.00	6,422.93	6,293.01	2,535.93	26.99	94.88	-36.91	2,990.66	8,029.61	8,856.24	8,748.47	107.77	82.175			
6,550.00	6,469.25	6,293.01	2,535.93	27.29	94.88	-33.95	2,990.66	8,029.61	8,862.26	8,754.43	107.83	82.189			
6,600.00	6,513.99	6,293.01	2,535.93	27.61	94.88	-31.97	2,990.66	8,029.61	8,864.91	8,757.01	107.90	82.158			
6,646.36	6,553.83	6,293.01	2,535.93	27.93	94.88	-30.71	2,990.66	8,029.61	8,864.34	8,756.35	107.98	82.091			
6,650.00	6,556.88	6,293.01	2,535.93	27.96	94.88	-30.63	2,990.66	8,029.61	8,864.17	8,756.18	107.99	82.085			
6,700.00	6,597.66	6,293.01	2,535.93	28.34	94.88	-29.74	2,990.66	8,029.61	8,860.04	8,751.95	108.09	81.967			
6,750.00	6,636.07	6,293.01	2,535.93	28.76	94.88	-29.19	2,990.66	8,029.61	8,852.56	8,744.35	108.21	81.807			
6,800.00	6,671.88	6,293.01	2,535.93	29.21	94.88	-28.94	2,990.66	8,029.61	8,841.75	8,733.40	108.35	81.604			
6,850.00	6,704.87	6,293.01	2,535.93	29.71	94.88	-28.94	2,990.66	8,029.61	8,827.67	8,719.16	108.50	81.358			
6,900.00	6,734.84	6,293.01	2,535.93	30.25	94.88	-29.18	2,990.66	8,029.61	8,810.39	8,701.71	108.68	81.070			
6,950.00	6,761.59	6,293.01	2,535.93	30.85	94.88	-29.66	2,990.66	8,029.61	8,790.00	8,681.13	108.87	80.741			
7,000.00	6,784.97	6,293.01	2,535.93	31.50	94.88	-30.37	2,990.66	8,029.61	8,766.60	8,657.53	109.07	80.373			
7,050.00	6,804.83	6,293.01	2,535.93	32.20	94.88	-31.35	2,990.66	8,029.61	8,740.32	8,631.02	109.30	79.966			
7,100.00	6,821.05	6,293.01	2,535.93	32.96	94.88	-32.63	2,990.66	8,029.61	8,711.29	8,601.75	109.54	79.524			
7,150.00	6,833.53	6,293.01	2,535.93	33.77	94.88	-34.24	2,990.66	8,029.61	8,679.67	8,569.86	109.80	79.048			
7,200.00	6,842.18	6,293.01	2,535.93	34.62	94.88	-36.24	2,990.66	8,029.61	8,645.61	8,535.53	110.08	78.540			
7,250.00	6,846.97	6,293.01	2,535.93	35.52	94.88	-38.73	2,990.66	8,029.61	8,609.31	8,498.94	110.37	78.005			
7,286.15	6,848.00	6,293.01	2,535.93	36.18	94.88	-40.89	2,990.66	8,029.61	8,581.77	8,471.19	110.59	77.602			
7,300.00	6,848.00	6,293.01	2,535.93	36.44	94.88	-40.89	2,990.66	8,029.61	8,571.03	8,460.36	110.67	77.445			
7,400.00	6,848.03	6,293.01	2,535.93	38.40	94.88	-40.89	2,990.66	8,029.61	8,493.75	8,382.45	111.31	76.309			
7,500.00	6,848.05	6,293.01	2,535.93	40.49	94.88	-40.89	2,990.66	8,029.61	8,416.95	8,304.96	111.99	75.155			
7,600.00	6,848.08	6,293.01	2,535.93	42.70	94.88	-40.89	2,990.66	8,029.61	8,340.65	8,227.91	112.73	73.985			
7,700.00	6,848.10	6,293.01	2,535.93	45.01	94.88	-40.89	2,990.66	8,029.61	8,264.84	8,151.32	113.52	72.802			
7,800.00	6,848.12	6,293.01	2,535.93	47.40	94.88	-40.89	2,990.66	8,029.61	8,189.56	8,075.19	114.37	71.609			
7,900.00	6,848.15	6,293.01	2,535.93	49.86	94.88	-40.89	2,990.66	8,029.61	8,114.81	7,999.55	115.26	70.407			
8,000.00	6,848.17	6,293.01	2,535.93	52.39	94.88	-40.89	2,990.66	8,029.61	8,040.61	7,924.42	116.19	69.201			
8,100.00	6,848.20	6,293.01	2,535.93	54.96	94.88	-40.89	2,990.66	8,029.61	7,966.97	7,849.80	117.17	67.992			
8,200.00	6,848.22	6,293.01	2,535.93	57.58	94.88	-40.89	2,990.66	8,029.61	7,893.91	7,775.71	118.20	66.784			
8,300.00	6,848.25	6,293.01	2,535.93	60.24	94.88	-40.89	2,990.66	8,029.61	7,821.45	7,702.18	119.27	65.577			
8,400.00	6,848.27	6,293.01	2,535.93	62.94	94.88	-40.89	2,990.66	8,029.61	7,749.60	7,629.22	120.38	64.374			
8,500.00	6,848.29	6,293.01	2,535.93	65.66	94.88	-40.89	2,990.66	8,029.61	7,678.39	7,556.85	121.54	63.178			
8,600.00	6,848.32	6,293.01	2,535.93	68.42	94.88	-40.89	2,990.66	8,029.61	7,607.82	7,485.09	122.73	61.990			
8,700.00	6,848.34	6,293.01	2,535.93	71.19	94.88	-40.89	2,990.66	8,029.61	7,537.91	7,413.96	123.96	60.811			
8,800.00	6,848.37	6,293.01	2,535.93	73.99	94.88	-40.89	2,990.66	8,029.61	7,468.69	7,343.47	125.22	59.644			
8,900.00	6,848.39	6,293.01	2,535.93	76.80	94.88	-40.89	2,990.66	8,029.61	7,400.18	7,273.66	126.52	58.490			

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit Com 138H - ST #2 - ST #2													Offset Site Error:	0.00 ft
Survey Program:		575-MWD+HDGM, 2974-MWD+HDGM						Rule Assigned:				Offset Well Error:	0.00 ft	
Reference	Offset	Semi Major Axis		Offset Wellbore Centre			Distance			Warning				
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
9,000.00	6,848.42	6,293.01	2,535.93	79.63	94.88	-40.89	2,990.66	8,029.61	7,332.39	7,204.53	127.86	57.349		
9,100.00	6,848.44	6,293.01	2,535.93	82.47	94.88	-40.89	2,990.66	8,029.61	7,265.34	7,136.11	129.22	56.223		
9,200.00	6,848.46	6,293.01	2,535.93	85.33	94.88	-40.89	2,990.66	8,029.61	7,199.05	7,068.43	130.62	55.114		
9,300.00	6,848.49	6,293.01	2,535.93	88.20	94.88	-40.89	2,990.66	8,029.61	7,133.56	7,001.51	132.05	54.022		
9,400.00	6,848.51	6,293.01	2,535.93	91.08	94.88	-40.89	2,990.66	8,029.61	7,068.87	6,935.36	133.51	52.947		
9,500.00	6,848.54	6,293.01	2,535.93	93.97	94.88	-40.89	2,990.66	8,029.61	7,005.01	6,870.01	134.99	51.892		
9,600.00	6,848.56	6,293.01	2,535.93	96.87	94.88	-40.89	2,990.66	8,029.61	6,942.00	6,805.50	136.51	50.855		
9,700.00	6,848.58	6,293.01	2,535.93	99.77	94.88	-40.89	2,990.66	8,029.61	6,879.87	6,741.83	138.04	49.839		
9,800.00	6,848.61	6,293.01	2,535.93	102.69	94.88	-40.89	2,990.66	8,029.61	6,818.64	6,679.04	139.60	48.842		
9,899.80	6,848.63	6,293.01	2,535.93	105.60	94.88	-40.89	2,990.66	8,029.61	6,758.45	6,617.27	141.19	47.869		
9,900.00	6,848.63	6,293.01	2,535.93	105.61	94.88	-40.89	2,990.66	8,029.61	6,758.34	6,617.15	141.19	47.867		
9,999.50	6,848.66	6,254.72	2,536.45	108.52	93.93	-40.66	2,962.32	8,055.35	6,699.17	6,557.54	141.63	47.300		
10,000.00	6,848.66	6,254.38	2,536.45	108.53	93.92	-40.66	2,962.07	8,055.57	6,698.87	6,557.24	141.63	47.299		
10,099.17	6,848.68	6,226.01	2,536.83	111.44	93.22	-40.50	2,941.07	8,074.64	6,640.36	6,497.99	142.37	46.640		
10,100.00	6,848.68	6,226.01	2,536.83	111.46	93.22	-40.50	2,941.07	8,074.64	6,639.88	6,497.49	142.39	46.633		
10,198.86	6,848.71	6,190.78	2,537.20	114.37	92.34	-40.29	2,915.09	8,098.44	6,582.19	6,439.27	142.92	46.054		
10,200.00	6,848.71	6,190.52	2,537.21	114.40	92.34	-40.28	2,914.90	8,098.62	6,581.52	6,438.59	142.93	46.046		
10,298.51	6,848.73	6,163.01	2,537.35	117.30	91.65	-40.12	2,894.76	8,117.36	6,524.84	6,381.13	143.71	45.404		
10,300.00	6,848.73	6,163.01	2,537.35	117.34	91.65	-40.12	2,894.76	8,117.36	6,523.99	6,380.26	143.73	45.390		
10,398.09	6,848.75	6,163.01	2,537.35	120.24	91.65	-40.12	2,894.76	8,117.36	6,468.39	6,323.03	145.36	44.498		
10,400.00	6,848.75	6,163.01	2,537.35	120.29	91.65	-40.12	2,894.76	8,117.36	6,467.32	6,321.92	145.40	44.481		
10,497.76	6,848.78	6,132.75	2,537.31	123.18	90.89	-39.94	2,872.80	8,138.19	6,412.65	6,266.57	146.09	43.896		
10,500.00	6,848.78	6,132.36	2,537.31	123.24	90.88	-39.94	2,872.52	8,138.45	6,411.41	6,265.30	146.11	43.880		
10,597.41	6,848.80	6,100.01	2,536.98	126.12	90.07	-39.74	2,849.32	8,160.99	6,357.94	6,211.20	146.74	43.329		
10,600.00	6,848.80	6,100.01	2,536.98	126.20	90.07	-39.74	2,849.32	8,160.99	6,356.52	6,209.74	146.78	43.306		
10,696.99	6,848.83	6,100.01	2,536.98	129.07	90.07	-39.74	2,849.32	8,160.99	6,304.03	6,155.60	148.43	42.471		
10,700.00	6,848.83	6,100.01	2,536.98	129.16	90.07	-39.74	2,849.32	8,160.99	6,302.41	6,153.93	148.48	42.446		
10,797.64	6,848.85	5,755.25	2,544.01	132.05	81.41	-37.69	2,603.38	8,402.32	6,247.70	6,108.57	139.14	44.903		
10,800.00	6,848.85	5,754.41	2,544.05	132.12	81.39	-37.68	2,602.79	8,402.90	6,246.38	6,107.23	139.15	44.890		
10,897.70	6,848.87	5,597.01	2,552.79	135.01	77.49	-36.74	2,489.92	8,512.25	6,190.75	6,055.04	135.72	45.615		
10,900.00	6,848.88	5,597.01	2,552.79	135.08	77.49	-36.74	2,489.92	8,512.25	6,189.44	6,053.69	135.76	45.592		
10,997.39	6,848.90	5,559.17	2,554.92	137.97	76.55	-36.50	2,462.65	8,538.41	6,134.23	5,998.07	136.16	45.052		
11,000.00	6,848.90	5,558.38	2,554.96	138.05	76.53	-36.50	2,462.08	8,538.96	6,132.76	5,996.58	136.18	45.035		
11,097.03	6,848.92	5,535.01	2,556.08	140.93	75.96	-36.35	2,445.26	8,555.13	6,078.52	5,941.47	137.05	44.353		
11,100.00	6,848.92	5,535.01	2,556.08	141.02	75.96	-36.35	2,445.26	8,555.13	6,076.87	5,939.77	137.10	44.324		
11,196.68	6,848.95	5,506.78	2,557.24	143.90	75.26	-36.17	2,424.99	8,574.75	6,023.63	5,885.82	137.81	43.711		
11,200.00	6,848.95	5,505.99	2,557.27	144.00	75.24	-36.17	2,424.42	8,575.30	6,021.81	5,883.98	137.84	43.688		
11,296.34	6,848.97	5,472.01	2,558.40	146.86	74.40	-35.95	2,400.18	8,599.08	5,969.66	5,831.31	138.35	43.150		
11,300.00	6,848.97	5,472.01	2,558.40	146.97	74.40	-35.95	2,400.18	8,599.08	5,967.68	5,829.27	138.41	43.116		
11,395.90	6,849.00	5,472.01	2,558.40	149.83	74.40	-35.95	2,400.18	8,599.08	5,916.62	5,776.56	140.06	42.243		
11,400.00	6,849.00	5,472.01	2,558.40	149.95	74.40	-35.95	2,400.18	8,599.08	5,914.46	5,774.33	140.13	42.206		
11,495.58	6,849.02	5,431.99	2,559.32	152.80	73.41	-35.70	2,371.77	8,627.25	5,864.36	5,723.94	140.42	41.762		
11,500.00	6,849.02	5,430.84	2,559.33	152.93	73.38	-35.69	2,370.95	8,628.06	5,862.07	5,721.61	140.46	41.734		
11,595.19	6,849.04	5,409.01	2,559.60	155.77	72.83	-35.55	2,355.50	8,643.47	5,813.12	5,671.76	141.36	41.122		
11,600.00	6,849.04	5,409.01	2,559.60	155.91	72.83	-35.55	2,355.50	8,643.47	5,810.67	5,669.22	141.45	41.080		
11,694.85	6,849.07	5,373.38	2,559.77	158.74	71.95	-35.31	2,330.32	8,668.69	5,762.75	5,620.88	141.86	40.621		
11,700.00	6,849.07	5,371.73	2,559.77	158.90	71.91	-35.30	2,329.16	8,669.86	5,760.17	5,618.27	141.90	40.594		
11,794.47	6,849.09	5,346.01	2,559.71	161.72	71.27	-35.13	2,311.03	8,688.10	5,713.31	5,570.66	142.65	40.052		
11,800.00	6,849.09	5,346.01	2,559.71	161.88	71.27	-35.13	2,311.03	8,688.10	5,710.59	5,567.85	142.74	40.006		
11,894.12	6,849.12	5,312.51	2,559.43	164.69	70.44	-34.91	2,287.50	8,711.94	5,664.79	5,521.58	143.21	39.556		
11,900.00	6,849.12	5,310.78	2,559.41	164.87	70.39	-34.89	2,286.29	8,713.19	5,661.95	5,518.70	143.25	39.524		
11,993.75	6,849.14	5,282.87	2,558.99	167.67	69.70	-34.71	2,266.79	8,733.15	5,617.25	5,473.35	143.90	39.035		

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit Com 138H - ST #2 - ST #2													Offset Site Error:	0.00 ft
Survey Program:		575-MWD+HDDGM, 2974-MWD+HDDGM						Rule Assigned:				Offset Well Error:	0.00 ft	
Reference	Offset	Semi Major Axis		Offset Wellbore Centre		Distance				Warning				
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
12,000.00	6,849.14	5,277.25	2,558.89	167.86	69.56	-34.67	2,262.87	8,737.18	5,614.30	5,470.49	143.81	39.039		
12,094.38	6,849.16	4,937.54	2,562.64	170.68	61.21	-32.36	2,025.01	8,979.57	5,568.53	5,435.17	133.37	41.754		
12,100.00	6,849.17	4,936.04	2,562.70	170.85	61.18	-32.35	2,023.95	8,980.64	5,565.71	5,432.30	133.41	41.719		
12,194.05	6,849.19	4,914.01	2,563.46	173.66	60.64	-32.20	2,008.43	8,996.25	5,518.97	5,384.73	134.24	41.113		
12,200.00	6,849.19	4,914.01	2,563.46	173.84	60.64	-32.20	2,008.43	8,996.25	5,516.04	5,381.70	134.34	41.060		
12,293.66	6,849.21	4,889.90	2,564.13	176.65	60.06	-32.03	1,991.53	9,013.43	5,470.49	5,335.40	135.09	40.496		
12,300.00	6,849.21	4,888.53	2,564.16	176.84	60.03	-32.02	1,990.57	9,014.42	5,467.44	5,332.29	135.15	40.456		
12,393.28	6,849.24	4,853.01	2,564.79	179.63	59.16	-31.77	1,965.88	9,039.94	5,423.19	5,287.72	135.47	40.033		
12,400.00	6,849.24	4,853.01	2,564.79	179.83	59.16	-31.77	1,965.88	9,039.94	5,420.02	5,284.44	135.58	39.976		
12,494.63	6,849.26	4,362.01	2,594.26	182.67	47.69	-28.27	1,619.40	9,385.80	5,371.42	5,252.10	119.32	45.016		
12,500.00	6,849.26	4,362.01	2,594.26	182.83	47.69	-28.27	1,619.40	9,385.80	5,368.62	5,249.21	119.41	44.959		
12,594.09	6,849.29	4,362.01	2,594.26	185.65	47.69	-28.27	1,619.40	9,385.80	5,320.21	5,199.23	120.98	43.975		
12,600.00	6,849.29	4,362.01	2,594.26	185.82	47.69	-28.27	1,619.40	9,385.80	5,317.20	5,196.12	121.08	43.915		
12,693.75	6,849.31	4,327.58	2,596.93	188.63	46.92	-28.02	1,594.62	9,409.55	5,269.83	5,148.45	121.37	43.418		
12,700.00	6,849.31	4,326.49	2,597.00	188.82	46.89	-28.01	1,593.83	9,410.30	5,266.71	5,145.27	121.44	43.370		
12,793.32	6,849.33	4,301.01	2,598.45	191.62	46.32	-27.81	1,575.52	9,427.95	5,220.82	5,098.77	122.04	42.778		
12,800.00	6,849.34	4,301.01	2,598.45	191.82	46.32	-27.81	1,575.52	9,427.95	5,217.57	5,095.41	122.16	42.712		
12,892.90	6,849.36	4,301.01	2,598.45	194.61	46.32	-27.81	1,575.52	9,427.95	5,172.99	5,049.28	123.72	41.813		
12,900.00	6,849.36	4,283.48	2,599.25	194.82	45.94	-27.68	1,562.91	9,440.11	5,169.57	5,046.40	123.17	41.971		
12,992.89	6,849.38	4,139.85	2,604.87	197.61	42.81	-26.52	1,457.96	9,537.98	5,125.35	5,006.15	119.20	42.998		
13,000.00	6,849.38	4,137.78	2,604.96	197.82	42.76	-26.51	1,456.44	9,539.37	5,121.95	5,002.71	119.24	42.956		
13,092.62	6,849.41	4,083.92	2,607.38	200.60	41.61	-26.07	1,417.09	9,576.08	5,078.09	4,959.39	118.69	42.783		
13,100.00	6,849.41	4,072.25	2,608.08	200.83	41.37	-25.98	1,408.70	9,584.15	5,074.60	4,956.23	118.37	42.871		
13,192.22	6,849.43	4,056.01	2,609.17	203.60	41.02	-25.85	1,397.12	9,595.49	5,031.54	4,912.27	119.27	42.185		
13,200.00	6,849.43	4,056.01	2,609.17	203.83	41.02	-25.85	1,397.12	9,595.49	5,027.97	4,908.57	119.40	42.110		
13,291.85	6,849.45	4,021.56	2,611.14	206.59	40.30	-25.57	1,372.51	9,619.52	4,986.07	4,866.47	119.60	41.691		
13,300.00	6,849.46	4,020.03	2,611.20	206.83	40.26	-25.56	1,371.41	9,620.58	4,982.41	4,862.74	119.67	41.635		
13,391.45	6,849.48	3,982.17	2,612.20	209.58	39.47	-25.25	1,343.98	9,646.65	4,942.04	4,822.35	119.69	41.291		
13,400.00	6,849.48	3,976.35	2,612.33	209.84	39.36	-25.20	1,339.72	9,650.62	4,938.29	4,818.69	119.60	41.290		
13,491.23	6,849.50	3,901.60	2,613.89	212.58	37.84	-24.56	1,284.82	9,701.31	4,898.50	4,780.37	118.13	41.467		
13,500.00	6,849.50	3,898.65	2,613.94	212.84	37.78	-24.53	1,282.64	9,703.30	4,894.70	4,776.55	118.16	41.426		
13,590.80	6,849.53	3,872.01	2,614.28	215.57	37.25	-24.30	1,262.95	9,721.25	4,855.99	4,737.43	118.56	40.958		
13,600.00	6,849.53	3,872.01	2,614.28	215.85	37.25	-24.30	1,262.95	9,721.25	4,852.13	4,733.42	118.71	40.874		
13,690.39	6,849.55	3,839.31	2,614.45	218.57	36.61	-24.02	1,238.83	9,743.32	4,814.72	4,695.87	118.86	40.509		
13,700.00	6,849.55	3,836.47	2,614.46	218.86	36.56	-23.99	1,236.74	9,745.24	4,810.81	4,691.92	118.90	40.462		
13,789.95	6,849.58	3,811.01	2,614.39	221.56	36.06	-23.77	1,218.01	9,762.49	4,774.78	4,655.48	119.31	40.020		
13,800.00	6,849.58	3,811.01	2,614.39	221.87	36.06	-23.77	1,218.01	9,762.49	4,770.83	4,651.36	119.47	39.934		
13,889.54	6,849.60	3,776.84	2,614.02	224.56	35.41	-23.46	1,192.90	9,785.65	4,736.14	4,616.63	119.51	39.629		
13,900.00	6,849.60	3,773.40	2,613.96	224.87	35.34	-23.43	1,190.36	9,787.99	4,732.16	4,612.62	119.54	39.587		
13,990.24	6,849.62	3,382.92	2,605.79	227.59	29.03	-19.62	884.72	10,029.74	4,696.04	4,591.11	104.93	44.754		
14,000.00	6,849.63	3,382.01	2,605.76	227.88	29.01	-19.61	883.95	10,030.24	4,692.00	4,586.96	105.04	44.670		
14,089.83	6,849.65	3,351.43	2,604.70	230.59	28.62	-19.28	858.45	10,047.08	4,655.40	4,550.30	105.10	44.294		
14,100.00	6,849.65	3,348.21	2,604.59	230.89	28.58	-19.25	855.77	10,048.86	4,651.33	4,546.21	105.12	44.248		
14,189.37	6,849.67	3,319.01	2,603.57	233.58	28.22	-18.94	831.58	10,065.19	4,616.19	4,510.97	105.22	43.872		
14,200.00	6,849.67	3,319.01	2,603.57	233.90	28.22	-18.94	831.58	10,065.19	4,612.09	4,506.72	105.37	43.769		
14,288.89	6,849.70	3,298.26	2,602.77	236.58	27.96	-18.71	814.47	10,076.89	4,578.50	4,472.69	105.81	43.271		
14,300.00	6,849.70	3,295.90	2,602.67	236.92	27.94	-18.69	812.52	10,078.23	4,574.38	4,468.51	105.87	43.207		
14,388.41	6,849.72	3,276.98	2,601.81	239.58	27.71	-18.49	796.96	10,088.95	4,542.40	4,436.05	106.36	42.709		
14,400.00	6,849.72	3,257.01	2,600.77	239.93	27.47	-18.27	780.57	10,100.31	4,538.39	4,432.70	105.70	42.938		
14,487.88	6,849.74	3,257.01	2,600.77	242.57	27.47	-18.27	780.57	10,100.31	4,507.97	4,401.03	106.94	42.156		
14,500.00	6,849.75	3,257.01	2,600.77	242.94	27.47	-18.27	780.57	10,100.31	4,503.89	4,396.79	107.11	42.051		
14,587.31	6,849.77	3,257.01	2,600.77	245.57	27.47	-18.27	780.57	10,100.31	4,475.38	4,367.05	108.33	41.314		

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit Com 138H - ST #2 - ST #2												Offset Site Error:	0.00 ft
Survey Program: 575-MWD+HDGM, 2974-MWD+HDGM												Offset Well Error:	0.00 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Semi Major Axis Offset	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Distance Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
14,600.00	6,849.77	3,257.01	2,600.77	245.95	27.47	-18.27	780.57	10,100.31	4,471.36	4,362.86	108.50	41.210	
14,686.73	6,849.79	3,257.01	2,600.77	248.56	27.47	-18.27	780.57	10,100.31	4,444.78	4,335.08	109.70	40.517	
14,700.00	6,849.80	3,257.01	2,600.77	248.96	27.47	-18.27	780.57	10,100.31	4,440.85	4,330.96	109.88	40.414	
14,786.14	6,849.82	3,257.01	2,600.77	251.56	27.47	-18.27	780.57	10,100.31	4,416.21	4,305.15	111.06	39.765	
14,800.00	6,849.82	3,257.01	2,600.77	251.98	27.47	-18.27	780.57	10,100.31	4,412.38	4,301.14	111.24	39.664	
14,885.73	6,849.84	3,228.23	2,598.62	254.56	27.14	-17.96	757.22	10,116.99	4,388.90	4,277.70	111.19	39.471	
14,900.00	6,849.84	3,227.18	2,598.52	254.99	27.13	-17.95	756.37	10,117.61	4,385.21	4,273.87	111.34	39.386	
14,984.99	6,849.86	3,194.01	2,594.58	257.55	26.76	-17.59	730.11	10,137.48	4,364.76	4,253.68	111.07	39.296	
15,000.00	6,849.87	3,194.01	2,594.58	258.01	26.76	-17.59	730.11	10,137.48	4,361.13	4,249.86	111.27	39.194	
15,084.54	6,849.89	3,194.01	2,594.58	260.56	26.76	-17.59	730.11	10,137.48	4,341.61	4,229.26	112.35	38.643	
15,100.00	6,849.89	3,194.01	2,594.58	261.02	26.76	-17.59	730.11	10,137.48	4,338.21	4,225.66	112.55	38.545	
15,183.93	6,849.91	3,194.01	2,594.58	263.55	26.76	-17.59	730.11	10,137.48	4,320.67	4,207.07	113.60	38.034	
15,200.00	6,849.92	3,194.01	2,594.58	264.04	26.76	-17.59	730.11	10,137.48	4,317.49	4,203.69	113.80	37.939	
15,283.31	6,849.94	3,194.01	2,594.58	266.55	26.76	-17.59	730.11	10,137.48	4,301.92	4,187.10	114.82	37.467	
15,300.00	6,849.94	3,194.01	2,594.58	267.05	26.76	-17.59	730.11	10,137.48	4,298.99	4,183.97	115.02	37.376	
15,382.69	6,849.96	3,194.01	2,594.58	269.55	26.76	-17.59	730.11	10,137.48	4,285.40	4,169.39	116.00	36.942	
15,400.00	6,849.97	3,194.01	2,594.58	270.07	26.76	-17.59	730.11	10,137.48	4,282.75	4,166.54	116.21	36.855	
15,482.07	6,849.98	3,194.01	2,594.58	272.54	26.76	-17.59	730.11	10,137.48	4,271.12	4,153.97	117.15	36.458	
15,500.00	6,849.99	3,194.01	2,594.58	273.08	26.76	-17.59	730.11	10,137.48	4,268.79	4,151.43	117.36	36.375	
15,581.54	6,850.01	3,162.01	2,589.27	275.54	26.41	-17.25	705.41	10,157.11	4,258.98	4,142.03	116.95	36.418	
15,600.00	6,850.01	3,162.01	2,589.27	276.10	26.41	-17.25	705.41	10,157.11	4,256.91	4,139.76	117.15	36.338	
15,680.93	6,850.03	3,162.01	2,589.27	278.54	26.41	-17.25	705.41	10,157.11	4,248.81	4,130.79	118.02	36.001	
15,700.00	6,850.04	3,162.01	2,589.27	279.12	26.41	-17.25	705.41	10,157.11	4,247.12	4,128.90	118.22	35.926	
15,780.31	6,850.06	3,162.01	2,589.27	281.54	26.41	-17.25	705.41	10,157.11	4,240.94	4,121.89	119.05	35.623	
15,800.00	6,850.06	3,162.01	2,589.27	282.14	26.41	-17.25	705.41	10,157.11	4,239.66	4,120.41	119.25	35.553	
15,879.69	6,850.08	3,162.01	2,589.27	284.54	26.41	-17.25	705.41	10,157.11	4,235.40	4,115.36	120.04	35.284	
15,900.00	6,850.09	3,162.01	2,589.27	285.15	26.41	-17.25	705.41	10,157.11	4,234.55	4,114.31	120.23	35.219	
15,979.20	6,850.11	3,131.01	2,582.77	287.54	26.09	-16.92	682.04	10,176.41	4,231.96	4,112.22	119.73	35.345	
16,000.00	6,850.11	3,131.01	2,582.77	288.17	26.09	-16.92	682.04	10,176.41	4,231.49	4,111.56	119.93	35.284	
16,085.75	6,850.13	3,131.01	2,582.77	290.76	26.09	-16.92	682.04	10,176.41	4,230.62	4,109.92	120.70	35.051 CC	
16,100.00	6,850.13	3,131.01	2,582.77	291.19	26.09	-16.92	682.04	10,176.41	4,230.64	4,109.82	120.82	35.015	
16,122.36	6,850.14	3,131.01	2,582.77	291.86	26.09	-16.92	682.04	10,176.41	4,230.78	4,109.76	121.02	34.960 ES	
16,200.00	6,850.16	3,131.01	2,582.77	294.21	26.09	-16.92	682.04	10,176.41	4,232.16	4,110.49	121.67	34.783	
16,300.00	6,850.18	3,100.01	2,575.10	297.23	25.79	-16.60	659.31	10,196.04	4,235.87	4,114.60	121.27	34.930	
16,400.00	6,850.21	3,100.01	2,575.10	300.25	25.79	-16.60	659.31	10,196.04	4,241.64	4,119.61	122.02	34.761	
16,500.00	6,850.23	3,100.01	2,575.10	303.27	25.79	-16.60	659.31	10,196.04	4,249.76	4,127.03	122.73	34.627 SF	
16,600.00	6,850.26	3,068.01	2,566.26	306.28	25.49	-16.27	636.84	10,217.03	4,259.93	4,137.72	122.21	34.856	
16,700.00	6,850.28	3,068.01	2,566.26	309.30	25.49	-16.27	636.84	10,217.03	4,272.21	4,149.38	122.83	34.782	
16,800.00	6,850.30	3,037.01	2,556.98	312.32	25.22	-15.96	615.81	10,237.84	4,286.60	4,164.29	122.31	35.046	
16,900.00	6,850.33	3,037.01	2,556.98	315.35	25.22	-15.96	615.81	10,237.84	4,302.97	4,180.13	122.84	35.030	
17,000.00	6,850.35	3,018.32	2,551.03	318.37	25.07	-15.78	603.43	10,250.51	4,321.40	4,198.71	122.69	35.223	
17,100.00	6,850.38	3,005.01	2,546.64	321.39	24.96	-15.65	594.89	10,259.72	4,341.84	4,219.15	122.69	35.388	
17,200.00	6,850.40	2,974.01	2,536.15	324.41	24.72	-15.37	575.99	10,281.93	4,364.11	4,241.95	122.16	35.724	
17,300.00	6,850.43	2,974.01	2,536.15	327.43	24.72	-15.37	575.99	10,281.93	4,388.30	4,265.80	122.51	35.821	
17,400.00	6,850.45	2,974.01	2,536.15	330.45	24.72	-15.37	575.99	10,281.93	4,414.64	4,291.83	122.81	35.948	
17,500.00	6,850.47	2,927.91	2,519.55	333.47	24.03	-14.97	550.04	10,316.22	4,441.92	4,320.19	121.73	36.489	
17,600.00	6,850.50	2,876.01	2,498.96	336.49	23.25	-14.55	523.37	10,355.68	4,472.20	4,351.59	120.61	37.080	
17,700.00	6,850.52	2,876.01	2,498.96	339.52	23.25	-14.55	523.37	10,355.68	4,503.07	4,382.28	120.79	37.281	
17,800.00	6,850.55	2,876.01	2,498.96	342.54	23.25	-14.55	523.37	10,355.68	4,535.93	4,415.01	120.92	37.511	
17,900.00	6,850.57	2,847.01	2,486.81	345.56	22.58	-14.33	509.23	10,377.90	4,570.56	4,450.30	120.26	38.005	
18,000.00	6,850.59	2,847.01	2,486.81	348.58	22.58	-14.33	509.23	10,377.90	4,606.81	4,486.48	120.33	38.286	
18,100.00	6,850.62	2,820.20	2,475.17	351.61	21.98	-14.12	496.34	10,398.32	4,644.48	4,524.79	119.69	38.805	

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit Com 138H - ST #2 - ST #2													Offset Site Error:	0.00 ft
Survey Program: 575-MWD+HDGM, 2974-MWD+HDGM													Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Rule Assigned:				Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
18,200.00	6,850.64	2,786.01	2,459.38	354.63	21.22	-13.87	480.45	10,424.14	4,684.15	4,565.28	118.87	39.406		
18,300.00	6,850.67	2,786.01	2,459.38	357.65	21.22	-13.87	480.45	10,424.14	4,724.90	4,606.05	118.85	39.756		
18,400.00	6,850.69	2,786.01	2,459.38	360.67	21.22	-13.87	480.45	10,424.14	4,767.39	4,648.60	118.79	40.133		
18,500.00	6,850.72	2,786.01	2,459.38	363.70	21.22	-13.87	480.45	10,424.14	4,811.59	4,692.89	118.70	40.535		
18,600.00	6,850.74	2,755.99	2,444.65	366.72	20.58	-13.64	466.88	10,446.50	4,856.89	4,738.97	117.93	41.186		
18,700.00	6,850.76	2,725.01	2,428.60	369.75	19.92	-13.41	453.11	10,469.14	4,904.04	4,786.91	117.13	41.870		
18,800.00	6,850.79	2,725.01	2,428.60	372.77	19.92	-13.41	453.11	10,469.14	4,952.17	4,835.20	116.97	42.337		
18,900.00	6,850.81	2,725.01	2,428.60	375.79	19.92	-13.41	453.11	10,469.14	5,001.84	4,885.05	116.79	42.827		
19,000.00	6,850.84	2,700.67	2,415.49	378.82	19.43	-13.24	442.49	10,486.69	5,052.76	4,936.65	116.10	43.520		
19,100.00	6,850.86	2,664.01	2,395.14	381.84	18.69	-12.97	426.89	10,512.89	5,105.06	4,989.88	115.18	44.323		
19,200.00	6,850.89	2,664.01	2,395.14	384.87	18.69	-12.97	426.89	10,512.89	5,158.23	5,043.28	114.95	44.874		
19,300.00	6,850.91	2,664.01	2,395.14	387.89	18.69	-12.97	426.89	10,512.89	5,212.77	5,098.07	114.70	45.447		
19,400.00	6,850.93	2,602.01	2,359.46	390.91	17.48	-12.54	401.45	10,556.75	5,268.21	5,154.86	113.35	46.477		
19,500.00	6,850.96	2,602.01	2,359.46	393.94	17.48	-12.54	401.45	10,556.75	5,324.56	5,211.48	113.08	47.085		
19,600.00	6,850.98	2,577.62	2,345.06	396.96	17.03	-12.38	391.73	10,573.86	5,381.99	5,269.58	112.41	47.880		
19,673.90	6,851.00	2,562.83	2,336.22	399.20	16.75	-12.28	385.91	10,584.19	5,425.06	5,313.10	111.96	48.455		
19,700.00	6,851.01	2,541.01	2,323.01	399.99	16.34	-12.14	377.44	10,599.36	5,440.49	5,328.94	111.55	48.773		
19,773.90	6,851.02	2,541.01	2,323.01	402.22	16.34	-12.14	377.44	10,599.36	5,484.17	5,372.84	111.33	49.260		



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit Com 150 - Lateral #1 - As Drilled													Offset Site Error:	0.00 ft
Survey Program: 100-Standard Keeper, 2396-MWD SDI													Offset Well Error:	0.00 ft
Reference	Offset	Semi Major Axis	Rule Assigned:											
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
0.00	0.00	0.00	0.00	0.00	0.00	104.08	-3,142.94	12,532.69	12,922.02					
100.00	100.00	0.00	0.00	0.30	0.00	104.08	-3,142.94	12,532.69	12,921.02	12,920.72	0.30	N/A		
200.00	200.00	4,040.00	2,657.57	0.66	26.67	97.46	-1,641.89	12,535.92	12,914.98	12,886.80	28.18	458.343		
300.00	300.00	4,040.00	2,657.57	1.01	26.67	97.46	-1,641.89	12,535.92	12,894.93	12,866.42	28.51	452.282		
400.00	400.00	4,040.00	2,657.57	1.37	26.67	97.46	-1,641.89	12,535.92	12,875.63	12,846.77	28.87	445.995		
500.00	500.00	4,040.00	2,657.57	1.73	26.67	97.46	-1,641.89	12,535.92	12,857.09	12,827.85	29.24	439.720		
600.00	599.98	4,040.00	2,657.57	2.08	26.67	-27.44	-1,641.89	12,535.92	12,837.76	12,808.16	29.61	433.590		
700.00	699.84	4,040.00	2,657.57	2.42	26.67	-27.64	-1,641.89	12,535.92	12,816.16	12,786.18	29.98	427.539		
800.00	799.45	4,040.00	2,657.57	2.77	26.67	-27.87	-1,641.89	12,535.92	12,792.28	12,761.93	30.35	421.501		
900.00	898.70	4,040.00	2,657.57	3.13	26.67	-28.12	-1,641.89	12,535.92	12,766.15	12,735.42	30.73	415.481		
963.97	961.95	4,040.00	2,657.57	3.37	26.67	-28.30	-1,641.89	12,535.92	12,748.25	12,717.28	30.97	411.605		
1,000.00	997.50	4,040.00	2,657.57	3.51	26.67	-28.30	-1,641.89	12,535.92	12,737.97	12,706.86	31.11	409.456		
1,100.00	1,096.19	4,040.00	2,657.57	3.90	26.67	-28.30	-1,641.89	12,535.92	12,709.91	12,678.42	31.48	403.692		
1,200.00	1,194.89	4,040.00	2,657.57	4.30	26.67	-28.30	-1,641.89	12,535.92	12,682.57	12,650.71	31.86	398.013		
1,300.00	1,293.58	4,040.00	2,657.57	4.70	26.67	-28.30	-1,641.89	12,535.92	12,655.97	12,623.72	32.25	392.435		
1,400.00	1,392.27	4,040.00	2,657.57	5.11	26.67	-28.30	-1,641.89	12,535.92	12,630.11	12,597.47	32.64	386.970		
1,500.00	1,490.96	4,040.00	2,657.57	5.52	26.67	-28.30	-1,641.89	12,535.92	12,604.98	12,571.95	33.03	381.626		
1,600.00	1,589.65	4,040.00	2,657.57	5.94	26.67	-28.30	-1,641.89	12,535.92	12,580.60	12,547.17	33.42	376.405		
1,700.00	1,688.34	4,040.00	2,657.57	6.36	26.67	-28.30	-1,641.89	12,535.92	12,556.96	12,523.15	33.82	371.310		
1,800.00	1,787.03	4,040.00	2,657.57	6.78	26.67	-28.30	-1,641.89	12,535.92	12,534.09	12,499.87	34.21	366.342		
1,900.00	1,885.73	4,040.00	2,657.57	7.20	26.67	-28.30	-1,641.89	12,535.92	12,511.96	12,477.35	34.61	361.501		
2,000.00	1,984.42	4,040.00	2,657.57	7.62	26.67	-28.30	-1,641.89	12,535.92	12,490.60	12,455.59	35.01	356.785		
2,100.00	2,083.11	4,040.00	2,657.57	8.04	26.67	-28.30	-1,641.89	12,535.92	12,470.01	12,434.60	35.41	352.193		
2,200.00	2,181.80	4,040.00	2,657.57	8.46	26.67	-28.30	-1,641.89	12,535.92	12,450.18	12,414.38	35.80	347.723		
2,300.00	2,280.49	4,040.00	2,657.57	8.89	26.67	-28.30	-1,641.89	12,535.92	12,431.13	12,394.93	36.20	343.374		
2,400.00	2,379.18	4,040.00	2,657.57	9.31	26.67	-28.30	-1,641.89	12,535.92	12,412.85	12,376.25	36.60	339.142		
2,500.00	2,477.87	4,040.00	2,657.57	9.74	26.67	-28.30	-1,641.89	12,535.92	12,395.35	12,358.36	37.00	335.026		
2,600.00	2,576.56	4,040.00	2,657.57	10.16	26.67	-28.30	-1,641.89	12,535.92	12,378.64	12,341.25	37.40	331.023		
2,700.00	2,675.26	4,040.00	2,657.57	10.59	26.67	-28.30	-1,641.89	12,535.92	12,362.71	12,324.92	37.79	327.130		
2,800.00	2,773.95	4,040.00	2,657.57	11.02	26.67	-28.30	-1,641.89	12,535.92	12,347.58	12,309.39	38.19	323.346		
2,900.00	2,872.64	4,040.00	2,657.57	11.44	26.67	-28.30	-1,641.89	12,535.92	12,333.23	12,294.65	38.58	319.667		
3,000.00	2,971.33	4,040.00	2,657.57	11.87	26.67	-28.30	-1,641.89	12,535.92	12,319.68	12,280.70	38.98	316.092		
3,100.00	3,070.02	4,040.00	2,657.57	12.30	26.67	-28.30	-1,641.89	12,535.92	12,306.93	12,267.56	39.37	312.617		
3,200.00	3,168.71	4,040.00	2,657.57	12.73	26.67	-28.30	-1,641.89	12,535.92	12,294.97	12,255.21	39.76	309.241		
3,300.00	3,267.40	4,040.00	2,657.57	13.16	26.67	-28.30	-1,641.89	12,535.92	12,283.82	12,243.67	40.15	305.961		
3,400.00	3,366.10	4,040.00	2,657.57	13.58	26.67	-28.30	-1,641.89	12,535.92	12,273.48	12,232.94	40.54	302.774		
3,500.00	3,464.79	4,040.00	2,657.57	14.01	26.67	-28.30	-1,641.89	12,535.92	12,263.94	12,223.01	40.92	299.679		
3,600.00	3,563.48	4,040.00	2,657.57	14.44	26.67	-28.30	-1,641.89	12,535.92	12,255.21	12,213.90	41.31	296.674		
3,700.00	3,662.17	4,040.00	2,657.57	14.87	26.67	-28.30	-1,641.89	12,535.92	12,247.29	12,205.59	41.69	293.755		
3,800.00	3,760.86	4,040.00	2,657.57	15.30	26.67	-28.30	-1,641.89	12,535.92	12,240.18	12,198.10	42.07	290.922		
3,900.00	3,859.55	4,040.00	2,657.57	15.73	26.67	-28.30	-1,641.89	12,535.92	12,233.88	12,191.43	42.45	288.172		
4,000.00	3,958.24	4,040.00	2,657.57	16.16	26.67	-28.30	-1,641.89	12,535.92	12,228.40	12,185.57	42.83	285.502		
4,100.00	4,056.94	4,040.00	2,657.57	16.59	26.67	-28.30	-1,641.89	12,535.92	12,223.74	12,180.53	43.21	282.912		
4,200.00	4,155.63	4,040.00	2,657.57	17.02	26.67	-28.30	-1,641.89	12,535.92	12,219.89	12,176.31	43.58	280.399		
4,300.00	4,254.32	4,040.00	2,657.57	17.45	26.67	-28.30	-1,641.89	12,535.92	12,216.86	12,172.91	43.95	277.961		
4,400.00	4,353.01	4,040.00	2,657.57	17.88	26.67	-28.30	-1,641.89	12,535.92	12,214.64	12,170.32	44.32	275.597		
4,500.00	4,451.70	4,040.00	2,657.57	18.30	26.67	-28.30	-1,641.89	12,535.92	12,213.25	12,168.56	44.69	273.304		
4,599.10	4,549.50	4,040.00	2,657.57	18.73	26.67	-28.30	-1,641.89	12,535.92	12,212.67	12,167.63	45.05	271.101		
4,600.00	4,550.39	4,040.00	2,657.57	18.73	26.67	-28.30	-1,641.89	12,535.92	12,212.67	12,167.62	45.05	271.082		
4,700.00	4,649.08	4,040.00	2,657.57	19.16	26.67	-28.30	-1,641.89	12,535.92	12,212.92	12,167.50	45.41	268.928		
4,800.00	4,747.77	4,040.00	2,657.57	19.59	26.67	-28.30	-1,641.89	12,535.92	12,213.98	12,168.20	45.77	266.841		
4,900.00	4,846.47	4,040.00	2,657.57	20.02	26.67	-28.30	-1,641.89	12,535.92	12,215.86	12,169.73	46.13	264.819		

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit Com 150 - Lateral #1 - As Drilled												Offset Site Error:	0.00 ft
Survey Program: 100-Standard Keeper, 2396-MWD SDI												Offset Well Error:	0.00 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Semi Major Axis Offset	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Distance Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,000.00	4,945.16	4,040.00	2,657.57	20.45	26.67	-28.30	-1,641.89	12,535.92	12,218.56	12,172.07	46.48	262.861	
5,100.00	5,043.85	4,040.00	2,657.57	20.88	26.67	-28.30	-1,641.89	12,535.92	12,222.07	12,175.24	46.83	260.965	
5,200.00	5,142.54	4,040.00	2,657.57	21.31	26.67	-28.30	-1,641.89	12,535.92	12,226.40	12,179.22	47.18	259.129	
5,300.00	5,241.23	4,040.00	2,657.57	21.74	26.67	-28.30	-1,641.89	12,535.92	12,231.55	12,184.03	47.53	257.354	
5,400.00	5,339.92	4,040.00	2,657.57	22.17	26.67	-28.30	-1,641.89	12,535.92	12,237.52	12,189.65	47.87	255.636	
5,500.00	5,438.61	4,040.00	2,657.57	22.61	26.67	-28.30	-1,641.89	12,535.92	12,244.30	12,196.08	48.21	253.974	
5,600.00	5,537.31	4,040.00	2,657.57	23.04	26.67	-28.30	-1,641.89	12,535.92	12,251.89	12,203.34	48.55	252.369	
5,700.00	5,636.00	4,040.00	2,657.57	23.47	26.67	-28.30	-1,641.89	12,535.92	12,260.29	12,211.41	48.88	250.817	
5,800.00	5,734.69	4,040.00	2,657.57	23.90	26.67	-28.30	-1,641.89	12,535.92	12,269.50	12,220.28	49.21	249.318	
5,900.00	5,833.38	4,040.00	2,657.57	24.33	26.67	-28.30	-1,641.89	12,535.92	12,279.52	12,229.98	49.54	247.870	
6,000.00	5,932.07	4,040.00	2,657.57	24.76	26.67	-28.30	-1,641.89	12,535.92	12,290.34	12,240.47	49.86	246.473	
6,100.00	6,030.76	4,040.00	2,657.57	25.19	26.67	-28.30	-1,641.89	12,535.92	12,301.97	12,251.78	50.19	245.125	
6,200.00	6,129.45	4,040.00	2,657.57	25.62	26.67	-28.30	-1,641.89	12,535.92	12,314.39	12,263.89	50.51	243.825	
6,300.00	6,228.15	4,040.00	2,657.57	26.05	26.67	-28.30	-1,641.89	12,535.92	12,327.62	12,276.80	50.82	242.572	
6,370.81	6,298.03	4,040.00	2,657.57	26.35	26.67	-28.30	-1,641.89	12,535.92	12,337.47	12,286.43	51.04	241.713	
6,400.00	6,326.74	4,040.00	2,657.57	26.48	26.67	-20.86	-1,641.89	12,535.92	12,340.98	12,289.85	51.13	241.351	
6,450.00	6,375.33	4,040.00	2,657.57	26.73	26.67	-13.33	-1,641.89	12,535.92	12,344.09	12,292.80	51.29	240.663	
6,500.00	6,422.93	4,040.00	2,657.57	26.99	26.67	-8.99	-1,641.89	12,535.92	12,343.51	12,292.05	51.45	239.895	
6,550.00	6,469.25	4,040.00	2,657.57	27.29	26.67	-6.18	-1,641.89	12,535.92	12,339.23	12,287.61	51.62	239.055	
6,600.00	6,513.99	4,040.00	2,657.57	27.61	26.67	-4.20	-1,641.89	12,535.92	12,331.28	12,279.51	51.78	238.153	
6,650.00	6,556.88	4,040.00	2,657.57	27.96	26.67	-2.70	-1,641.89	12,535.92	12,319.71	12,267.77	51.94	237.198	
6,700.00	6,597.66	4,040.00	2,657.57	28.34	26.67	-1.50	-1,641.89	12,535.92	12,304.58	12,252.48	52.09	236.200	
6,750.00	6,636.07	4,040.00	2,657.57	28.76	26.67	-0.48	-1,641.89	12,535.92	12,285.95	12,233.71	52.24	235.169	
6,800.00	6,671.88	4,040.00	2,657.57	29.21	26.67	0.43	-1,641.89	12,535.92	12,263.95	12,211.56	52.38	234.112	
6,850.00	6,704.87	4,040.00	2,657.57	29.71	26.67	1.29	-1,641.89	12,535.92	12,238.67	12,186.16	52.52	233.039	
6,900.00	6,734.84	4,040.00	2,657.57	30.25	26.67	2.13	-1,641.89	12,535.92	12,210.27	12,157.63	52.64	231.958	
6,950.00	6,761.59	4,040.00	2,657.57	30.85	26.67	3.01	-1,641.89	12,535.92	12,178.88	12,126.13	52.75	230.875	
7,000.00	6,784.97	4,040.00	2,657.57	31.50	26.67	3.96	-1,641.89	12,535.92	12,144.69	12,091.84	52.85	229.798	
7,050.00	6,804.83	4,040.00	2,657.57	32.20	26.67	5.03	-1,641.89	12,535.92	12,107.88	12,054.95	52.93	228.732	
7,100.00	6,821.05	4,040.00	2,657.57	32.96	26.67	6.30	-1,641.89	12,535.92	12,068.66	12,015.65	53.01	227.682	
7,150.00	6,833.53	4,040.00	2,657.57	33.77	26.67	7.87	-1,641.89	12,535.92	12,027.24	11,974.18	53.06	226.654	
7,200.00	6,842.18	4,040.00	2,657.57	34.62	26.67	9.88	-1,641.89	12,535.92	11,983.86	11,930.75	53.11	225.648	
7,250.00	6,846.97	4,040.00	2,657.57	35.52	26.67	12.61	-1,641.89	12,535.92	11,938.77	11,885.63	53.14	224.669	
7,286.15	6,848.00	4,040.00	2,657.57	36.18	26.67	15.29	-1,641.89	12,535.92	11,905.24	11,852.09	53.15	223.974	
7,300.00	6,848.00	4,040.00	2,657.57	36.44	26.67	15.29	-1,641.89	12,535.92	11,892.27	11,839.11	53.16	223.710	
7,400.00	6,848.03	4,040.00	2,657.57	38.40	26.67	15.29	-1,641.89	12,535.92	11,798.64	11,745.46	53.18	221.846	
7,500.00	6,848.05	4,040.00	2,657.57	40.49	26.67	15.29	-1,641.89	12,535.92	11,705.12	11,651.91	53.22	219.957	
7,600.00	6,848.08	4,040.00	2,657.57	42.70	26.67	15.29	-1,641.89	12,535.92	11,611.71	11,558.45	53.25	218.042	
7,700.00	6,848.10	4,040.00	2,657.57	45.01	26.67	15.29	-1,641.89	12,535.92	11,518.41	11,465.11	53.30	216.103	
7,800.00	6,848.12	4,040.00	2,657.57	47.40	26.67	15.29	-1,641.89	12,535.92	11,425.22	11,371.86	53.35	214.138	
7,900.00	6,848.15	4,040.00	2,657.57	49.86	26.67	15.29	-1,641.89	12,535.92	11,332.15	11,278.73	53.42	212.148	
8,000.00	6,848.17	4,040.00	2,657.57	52.39	26.67	15.29	-1,641.89	12,535.92	11,239.19	11,185.71	53.49	210.132	
8,100.00	6,848.20	4,040.00	2,657.57	54.96	26.67	15.29	-1,641.89	12,535.92	11,146.36	11,092.80	53.56	208.091	
8,200.00	6,848.22	4,040.00	2,657.57	57.58	26.67	15.29	-1,641.89	12,535.92	11,053.65	11,000.00	53.65	206.025	
8,300.00	6,848.25	4,040.00	2,657.57	60.24	26.67	15.29	-1,641.89	12,535.92	10,961.08	10,907.33	53.75	203.933	
8,400.00	6,848.27	4,040.00	2,657.57	62.94	26.67	15.29	-1,641.89	12,535.92	10,868.63	10,814.78	53.85	201.817	
8,500.00	6,848.29	4,040.00	2,657.57	65.66	26.67	15.29	-1,641.89	12,535.92	10,776.32	10,722.35	53.97	199.677	
8,600.00	6,848.32	4,040.00	2,657.57	68.42	26.67	15.29	-1,641.89	12,535.92	10,684.14	10,630.05	54.09	197.512	
8,700.00	6,848.34	4,040.00	2,657.57	71.19	26.67	15.29	-1,641.89	12,535.92	10,592.11	10,537.88	54.23	195.323	
8,800.00	6,848.37	4,040.00	2,657.57	73.99	26.67	15.29	-1,641.89	12,535.92	10,500.23	10,445.85	54.37	193.112	
8,900.00	6,848.39	4,040.00	2,657.57	76.80	26.67	15.29	-1,641.89	12,535.92	10,408.49	10,353.96	54.53	190.877	
9,000.00	6,848.42	4,040.00	2,657.57	79.63	26.67	15.29	-1,641.89	12,535.92	10,316.91	10,262.21	54.70	188.620	

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit Com 150 - Lateral #1 - As Drilled												Offset Site Error:	0.00 ft
Survey Program: 100-Standard Keeper, 2396-MWD SDI												Offset Well Error:	0.00 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Semi Major Axis Offset	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Distance Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
9,100.00	6,848.44	4,040.00	2,657.57	82.47	26.67	15.29	-1,641.89	12,535.92	10,225.48	10,170.61	54.87	186.342	
9,200.00	6,848.46	4,040.00	2,657.57	85.33	26.67	15.29	-1,641.89	12,535.92	10,134.22	10,079.16	55.06	184.043	
9,300.00	6,848.49	4,040.00	2,657.57	88.20	26.67	15.29	-1,641.89	12,535.92	10,043.13	9,987.86	55.27	181.724	
9,400.00	6,848.51	4,040.00	2,657.57	91.08	26.67	15.29	-1,641.89	12,535.92	9,952.20	9,896.72	55.48	179.386	
9,500.00	6,848.54	4,040.00	2,657.57	93.97	26.67	15.29	-1,641.89	12,535.92	9,861.45	9,805.75	55.71	177.029	
9,600.00	6,848.56	4,040.00	2,657.57	96.87	26.67	15.29	-1,641.89	12,535.92	9,770.88	9,714.94	55.94	174.656	
9,700.00	6,848.58	4,040.00	2,657.57	99.77	26.67	15.29	-1,641.89	12,535.92	9,680.50	9,624.30	56.20	172.266	
9,800.00	6,848.61	4,040.00	2,657.57	102.69	26.67	15.29	-1,641.89	12,535.92	9,590.31	9,533.85	56.46	169.861	
9,900.00	6,848.63	4,040.00	2,657.57	105.61	26.67	15.29	-1,641.89	12,535.92	9,500.31	9,443.57	56.74	167.443	
10,000.00	6,848.66	4,040.00	2,657.57	108.53	26.67	15.29	-1,641.89	12,535.92	9,410.51	9,353.49	57.03	165.011	
10,100.00	6,848.68	4,040.00	2,657.57	111.46	26.67	15.29	-1,641.89	12,535.92	9,320.93	9,263.59	57.34	162.568	
10,200.00	6,848.71	4,040.00	2,657.57	114.40	26.67	15.29	-1,641.89	12,535.92	9,231.56	9,173.90	57.66	160.115	
10,300.00	6,848.73	4,040.00	2,657.57	117.34	26.67	15.29	-1,641.89	12,535.92	9,142.40	9,084.41	57.99	157.653	
10,400.00	6,848.75	4,040.00	2,657.57	120.29	26.67	15.29	-1,641.89	12,535.92	9,053.48	8,995.14	58.34	155.183	
10,500.00	6,848.78	4,040.00	2,657.57	123.24	26.67	15.29	-1,641.89	12,535.92	8,964.79	8,906.08	58.71	152.708	
10,600.00	6,848.80	4,040.00	2,657.57	126.20	26.67	15.29	-1,641.89	12,535.92	8,876.33	8,817.25	59.09	150.227	
10,700.00	6,848.83	4,040.00	2,657.57	129.16	26.67	15.29	-1,641.89	12,535.92	8,788.13	8,728.65	59.48	147.743	
10,800.00	6,848.85	4,040.00	2,657.57	132.12	26.67	15.29	-1,641.89	12,535.92	8,700.18	8,640.29	59.89	145.258	
10,900.00	6,848.88	4,040.00	2,657.57	135.08	26.67	15.29	-1,641.89	12,535.92	8,612.49	8,552.17	60.32	142.772	
11,000.00	6,848.90	4,040.00	2,657.57	138.05	26.67	15.29	-1,641.89	12,535.92	8,525.08	8,464.31	60.77	140.287	
11,100.00	6,848.92	4,040.00	2,657.57	141.02	26.67	15.29	-1,641.89	12,535.92	8,437.94	8,376.71	61.23	137.805	
11,200.00	6,848.95	4,040.00	2,657.57	144.00	26.67	15.29	-1,641.89	12,535.92	8,351.10	8,289.39	61.71	135.327	
11,300.00	6,848.97	4,040.00	2,657.57	146.97	26.67	15.29	-1,641.89	12,535.92	8,264.55	8,202.34	62.21	132.855	
11,400.00	6,849.00	4,040.00	2,657.57	149.95	26.67	15.29	-1,641.89	12,535.92	8,178.30	8,115.58	62.72	130.390	
11,500.00	6,849.02	4,040.00	2,657.57	152.93	26.67	15.29	-1,641.89	12,535.92	8,092.38	8,029.12	63.25	127.933	
11,600.00	6,849.04	4,040.00	2,657.57	155.91	26.67	15.29	-1,641.89	12,535.92	8,006.78	7,942.97	63.81	125.487	
11,700.00	6,849.07	4,040.00	2,657.57	158.90	26.67	15.29	-1,641.89	12,535.92	7,921.51	7,857.14	64.38	123.052	
11,800.00	6,849.09	4,040.00	2,657.57	161.88	26.67	15.29	-1,641.89	12,535.92	7,836.60	7,771.64	64.96	120.630	
11,900.00	6,849.12	4,040.00	2,657.57	164.87	26.67	15.29	-1,641.89	12,535.92	7,752.05	7,686.47	65.57	118.222	
12,000.00	6,849.14	4,040.00	2,657.57	167.86	26.67	15.29	-1,641.89	12,535.92	7,667.86	7,601.66	66.20	115.830	
12,100.00	6,849.17	4,040.00	2,657.57	170.85	26.67	15.29	-1,641.89	12,535.92	7,584.07	7,517.22	66.85	113.455	
12,200.00	6,849.19	4,040.00	2,657.57	173.84	26.67	15.29	-1,641.89	12,535.92	7,500.66	7,433.15	67.51	111.099	
12,300.00	6,849.21	4,040.00	2,657.57	176.84	26.67	15.29	-1,641.89	12,535.92	7,417.67	7,349.47	68.20	108.762	
12,400.00	6,849.24	4,040.00	2,657.57	179.83	26.67	15.29	-1,641.89	12,535.92	7,335.11	7,266.20	68.91	106.446	
12,500.00	6,849.26	4,040.00	2,657.57	182.83	26.67	15.29	-1,641.89	12,535.92	7,252.98	7,183.34	69.64	104.152	
12,600.00	6,849.29	4,040.00	2,657.57	185.82	26.67	15.29	-1,641.89	12,535.92	7,171.31	7,100.92	70.39	101.881	
12,700.00	6,849.31	4,040.00	2,657.57	188.82	26.67	15.29	-1,641.89	12,535.92	7,090.10	7,018.94	71.16	99.635	
12,800.00	6,849.34	4,040.00	2,657.57	191.82	26.67	15.29	-1,641.89	12,535.92	7,009.38	6,937.43	71.95	97.414	
12,900.00	6,849.36	4,040.00	2,657.57	194.82	26.67	15.29	-1,641.89	12,535.92	6,929.17	6,856.40	72.77	95.220	
13,000.00	6,849.38	4,040.00	2,657.57	197.82	26.67	15.29	-1,641.89	12,535.92	6,849.47	6,775.87	73.61	93.053	
13,100.00	6,849.41	4,040.00	2,657.57	200.83	26.67	15.29	-1,641.89	12,535.92	6,770.32	6,695.85	74.47	90.915	
13,200.00	6,849.43	4,040.00	2,657.57	203.83	26.67	15.29	-1,641.89	12,535.92	6,691.72	6,616.37	75.35	88.807	
13,300.00	6,849.46	4,040.00	2,657.57	206.83	26.67	15.29	-1,641.89	12,535.92	6,613.70	6,537.44	76.26	86.729	
13,400.00	6,849.48	4,040.00	2,657.57	209.84	26.67	15.29	-1,641.89	12,535.92	6,536.28	6,459.09	77.19	84.682	
13,500.00	6,849.50	4,040.00	2,657.57	212.84	26.67	15.29	-1,641.89	12,535.92	6,459.48	6,381.34	78.14	82.667	
13,600.00	6,849.53	4,040.00	2,657.57	215.85	26.67	15.29	-1,641.89	12,535.92	6,383.32	6,304.21	79.11	80.685	
13,700.00	6,849.55	4,040.00	2,657.57	218.86	26.67	15.29	-1,641.89	12,535.92	6,307.83	6,227.72	80.11	78.736	
13,800.00	6,849.58	4,040.00	2,657.57	221.87	26.67	15.29	-1,641.89	12,535.92	6,233.03	6,151.89	81.14	76.821	
13,900.00	6,849.60	4,040.00	2,657.57	224.87	26.67	15.29	-1,641.89	12,535.92	6,158.94	6,076.76	82.18	74.941	
14,000.00	6,849.63	4,040.00	2,657.57	227.88	26.67	15.29	-1,641.89	12,535.92	6,085.60	6,002.34	83.25	73.097	
14,100.00	6,849.65	4,040.00	2,657.57	230.89	26.67	15.29	-1,641.89	12,535.92	6,013.02	5,928.67	84.35	71.288	
14,200.00	6,849.67	4,040.00	2,657.57	233.90	26.67	15.29	-1,641.89	12,535.92	5,941.24	5,855.77	85.47	69.516	

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit Com 150 - Lateral #1 - As Drilled											Offset Site Error:	0.00 ft
Survey Program: 100-Standard Keeper, 2396-MWD SDI											Offset Well Error:	0.00 ft
Reference	Offset	Semi Major Axis		Offset Wellbore Centre		Distance		Rule Assigned:		Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor
14,300.00	6,849.70	4,040.00	2,657.57	236.92	26.67	15.29	-1,641.89	12,535.92	5,870.28	5,783.68	86.61	67.780
14,400.00	6,849.72	4,040.00	2,657.57	239.93	26.67	15.29	-1,641.89	12,535.92	5,800.18	5,712.41	87.77	66.082
14,499.70	6,849.75	4,040.00	2,657.57	242.93	26.67	15.29	-1,641.89	12,535.92	5,731.18	5,642.22	88.96	64.426
14,500.00	6,849.75	4,040.00	2,657.57	242.94	26.67	15.29	-1,641.89	12,535.92	5,730.97	5,642.01	88.96	64.422
14,599.28	6,849.77	4,040.00	2,657.57	245.93	26.67	15.29	-1,641.89	12,535.92	5,663.17	5,573.01	90.16	62.811
14,600.00	6,849.77	4,040.00	2,657.57	245.95	26.67	15.29	-1,641.89	12,535.92	5,662.68	5,572.51	90.17	62.799
14,698.86	6,849.80	4,040.00	2,657.57	248.93	26.67	15.29	-1,641.89	12,535.92	5,596.11	5,504.72	91.39	61.233
14,700.00	6,849.80	4,040.00	2,657.57	248.96	26.67	15.29	-1,641.89	12,535.92	5,595.35	5,503.94	91.41	61.215
14,798.43	6,849.82	4,040.00	2,657.57	251.93	26.67	15.29	-1,641.89	12,535.92	5,530.03	5,437.39	92.64	59.693
14,800.00	6,849.82	4,040.00	2,657.57	251.98	26.67	15.29	-1,641.89	12,535.92	5,529.00	5,436.34	92.66	59.669
14,897.99	6,849.84	4,040.00	2,657.57	254.93	26.67	15.29	-1,641.89	12,535.92	5,464.97	5,371.06	93.91	58.192
14,900.00	6,849.84	4,040.00	2,657.57	254.99	26.67	15.29	-1,641.89	12,535.92	5,463.67	5,369.74	93.94	58.162
14,997.56	6,849.87	4,040.00	2,657.57	257.93	26.67	15.29	-1,641.89	12,535.92	5,400.97	5,305.76	95.20	56.730
15,000.00	6,849.87	4,040.00	2,657.57	258.01	26.67	15.29	-1,641.89	12,535.92	5,399.41	5,304.17	95.24	56.695
15,097.12	6,849.89	4,040.00	2,657.57	260.93	26.67	15.29	-1,641.89	12,535.92	5,338.06	5,241.54	96.52	55.307
15,100.00	6,849.89	4,040.00	2,657.57	261.02	26.67	15.29	-1,641.89	12,535.92	5,336.25	5,239.69	96.56	55.266
15,196.67	6,849.92	4,040.00	2,657.57	263.94	26.67	15.29	-1,641.89	12,535.92	5,276.27	5,178.43	97.85	53.923
15,200.00	6,849.92	4,040.00	2,657.57	264.04	26.67	15.29	-1,641.89	12,535.92	5,274.23	5,176.33	97.89	53.877
15,296.22	6,849.94	4,040.00	2,657.57	266.94	26.67	15.29	-1,641.89	12,535.92	5,215.67	5,116.47	99.20	52.578
15,300.00	6,849.94	4,040.00	2,657.57	267.05	26.67	15.29	-1,641.89	12,535.92	5,213.39	5,114.14	99.25	52.527
15,395.76	6,849.96	4,040.00	2,657.57	269.94	26.67	15.29	-1,641.89	12,535.92	5,156.27	5,055.70	100.57	51.272
15,400.00	6,849.97	4,040.00	2,657.57	270.07	26.67	15.29	-1,641.89	12,535.92	5,153.77	5,053.14	100.63	51.217
15,495.30	6,849.99	4,040.00	2,657.57	272.94	26.67	15.29	-1,641.89	12,535.92	5,098.13	4,996.18	101.95	50.006
15,500.00	6,849.99	4,040.00	2,657.57	273.08	26.67	15.29	-1,641.89	12,535.92	5,095.41	4,993.40	102.02	49.947
15,594.83	6,850.01	4,040.00	2,657.57	275.94	26.67	15.29	-1,641.89	12,535.92	5,041.28	4,937.94	103.35	48.779
15,600.00	6,850.01	4,040.00	2,657.57	276.10	26.67	15.29	-1,641.89	12,535.92	5,038.37	4,934.94	103.42	48.716
15,694.35	6,850.04	4,040.00	2,657.57	278.95	26.67	15.29	-1,641.89	12,535.92	4,985.78	4,881.02	104.76	47.591
15,700.00	6,850.04	4,040.00	2,657.57	279.12	26.67	15.29	-1,641.89	12,535.92	4,982.68	4,877.83	104.84	47.525
15,793.87	6,850.06	4,040.00	2,657.57	281.95	26.67	15.29	-1,641.89	12,535.92	4,931.67	4,825.48	106.19	46.443
15,800.00	6,850.06	4,040.00	2,657.57	282.14	26.67	15.29	-1,641.89	12,535.92	4,928.39	4,822.11	106.28	46.373
15,893.38	6,850.08	4,040.00	2,657.57	284.95	26.67	15.29	-1,641.89	12,535.92	4,878.99	4,771.37	107.62	45.334
15,900.00	6,850.09	4,040.00	2,657.57	285.15	26.67	15.29	-1,641.89	12,535.92	4,875.54	4,767.82	107.72	45.261
15,992.89	6,850.11	4,040.00	2,657.57	287.96	26.67	15.29	-1,641.89	12,535.92	4,827.79	4,718.72	109.07	44.264
16,000.00	6,850.11	4,040.00	2,657.57	288.17	26.67	15.29	-1,641.89	12,535.92	4,824.19	4,715.02	109.17	44.189
16,092.38	6,850.13	4,040.00	2,657.57	290.96	26.67	15.29	-1,641.89	12,535.92	4,778.12	4,667.60	110.52	43.232
16,100.00	6,850.13	4,040.00	2,657.57	291.19	26.67	15.29	-1,641.89	12,535.92	4,774.38	4,663.75	110.63	43.155
16,191.87	6,850.16	4,040.00	2,657.57	293.96	26.67	15.29	-1,641.89	12,535.92	4,730.02	4,618.04	111.98	42.240
16,200.00	6,850.16	4,040.00	2,657.57	294.21	26.67	15.29	-1,641.89	12,535.92	4,726.17	4,614.07	112.10	42.161
16,291.36	6,850.18	4,040.00	2,657.57	296.97	26.67	15.29	-1,641.89	12,535.92	4,683.55	4,570.11	113.44	41.286
16,300.00	6,850.18	4,040.00	2,657.57	297.23	26.67	15.29	-1,641.89	12,535.92	4,679.59	4,566.02	113.57	41.205
16,390.83	6,850.21	4,040.00	2,657.57	299.97	26.67	15.29	-1,641.89	12,535.92	4,638.75	4,523.85	114.90	40.371
16,400.00	6,850.21	4,040.00	2,657.57	300.25	26.67	15.29	-1,641.89	12,535.92	4,634.70	4,519.67	115.04	40.288
16,490.30	6,850.23	4,040.00	2,657.57	302.97	26.67	15.29	-1,641.89	12,535.92	4,595.67	4,479.30	116.36	39.494
16,500.00	6,850.23	4,040.00	2,657.57	303.27	26.67	15.29	-1,641.89	12,535.92	4,591.56	4,475.05	116.51	39.410
16,589.75	6,850.25	4,040.00	2,657.57	305.98	26.67	15.29	-1,641.89	12,535.92	4,554.35	4,436.53	117.82	38.654
16,600.00	6,850.26	4,040.00	2,657.57	306.28	26.67	15.29	-1,641.89	12,535.92	4,550.20	4,432.23	117.97	38.570
16,689.20	6,850.28	4,040.00	2,657.57	308.98	26.67	15.29	-1,641.89	12,535.92	4,514.86	4,395.58	119.28	37.852
16,700.00	6,850.28	4,040.00	2,657.57	309.30	26.67	15.29	-1,641.89	12,535.92	4,510.68	4,391.25	119.43	37.767
16,788.65	6,850.30	4,040.00	2,657.57	311.98	26.67	15.29	-1,641.89	12,535.92	4,477.22	4,356.50	120.72	37.087
16,800.00	6,850.30	4,040.00	2,657.57	312.32	26.67	15.29	-1,641.89	12,535.92	4,473.05	4,352.16	120.89	37.002
16,888.08	6,850.33	4,040.00	2,657.57	314.99	26.67	15.29	-1,641.89	12,535.92	4,441.50	4,319.35	122.16	36.359
16,900.00	6,850.33	4,040.00	2,657.57	315.35	26.67	15.29	-1,641.89	12,535.92	4,437.35	4,315.02	122.33	36.274

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit Com 150 - Lateral #1 - As Drilled											Offset Site Error:	0.00 ft
Survey Program: 100-Standard Keeper, 2396-MWD SDI											Offset Well Error:	0.00 ft
Reference	Offset	Semi Major Axis		Distance		Rule Assigned:		Warning				
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor
16,987.50	6,850.35	4,040.00	2,657.57	317.99	26.67	15.29	-1,641.89	12,535.92	4,407.74	4,284.16	123.58	35.667
17,000.00	6,850.35	4,040.00	2,657.57	318.37	26.67	15.29	-1,641.89	12,535.92	4,403.63	4,279.88	123.76	35.583
17,086.92	6,850.37	4,040.00	2,657.57	320.99	26.67	15.29	-1,641.89	12,535.92	4,375.97	4,250.99	124.99	35.011
17,100.00	6,850.38	4,040.00	2,657.57	321.39	26.67	15.29	-1,641.89	12,535.92	4,371.94	4,246.77	125.17	34.928
17,186.33	6,850.40	4,040.00	2,657.57	323.99	26.67	15.29	-1,641.89	12,535.92	4,346.25	4,219.87	126.38	34.391
17,200.00	6,850.40	4,040.00	2,657.57	324.41	26.67	15.29	-1,641.89	12,535.92	4,342.33	4,215.76	126.57	34.308
17,285.73	6,850.42	4,040.00	2,657.57	327.00	26.67	15.29	-1,641.89	12,535.92	4,318.62	4,190.87	127.75	33.805
17,300.00	6,850.43	4,040.00	2,657.57	327.43	26.67	15.29	-1,641.89	12,535.92	4,314.83	4,186.88	127.95	33.723
17,385.13	6,850.45	4,040.00	2,657.57	330.00	26.67	15.29	-1,641.89	12,535.92	4,293.11	4,164.01	129.10	33.253
17,400.00	6,850.45	4,040.00	2,657.57	330.45	26.67	15.29	-1,641.89	12,535.92	4,289.48	4,160.18	129.31	33.173
17,484.51	6,850.47	4,040.00	2,657.57	333.00	26.67	15.29	-1,641.89	12,535.92	4,269.77	4,139.33	130.44	32.735
17,500.00	6,850.47	4,040.00	2,657.57	333.47	26.67	15.29	-1,641.89	12,535.92	4,266.33	4,135.69	130.64	32.657
17,583.90	6,850.49	4,040.00	2,657.57	336.01	26.67	15.29	-1,641.89	12,535.92	4,248.62	4,116.88	131.74	32.250
17,600.00	6,850.50	4,040.00	2,657.57	336.49	26.67	15.29	-1,641.89	12,535.92	4,245.41	4,113.46	131.95	32.174
17,683.28	6,850.52	4,040.00	2,657.57	339.01	26.67	15.29	-1,641.89	12,535.92	4,229.71	4,096.69	133.02	31.797
17,700.00	6,850.52	4,040.00	2,657.57	339.52	26.67	15.29	-1,641.89	12,535.92	4,226.75	4,093.51	133.24	31.724
17,782.65	6,850.54	4,040.00	2,657.57	342.01	26.67	15.29	-1,641.89	12,535.92	4,213.06	4,078.78	134.28	31.376
17,800.00	6,850.55	4,040.00	2,657.57	342.54	26.67	15.29	-1,641.89	12,535.92	4,210.38	4,075.89	134.49	31.305
17,882.02	6,850.57	4,040.00	2,657.57	345.02	26.67	15.29	-1,641.89	12,535.92	4,198.69	4,063.18	135.50	30.986
17,900.00	6,850.57	4,040.00	2,657.57	345.56	26.67	15.29	-1,641.89	12,535.92	4,196.34	4,060.61	135.72	30.918
17,981.39	6,850.59	4,040.00	2,657.57	348.02	26.67	15.29	-1,641.89	12,535.92	4,186.63	4,049.93	136.70	30.626
18,000.00	6,850.59	4,040.00	2,657.57	348.58	26.67	15.29	-1,641.89	12,535.92	4,184.63	4,047.71	136.92	30.562
18,080.76	6,850.61	4,040.00	2,657.57	351.02	26.67	15.29	-1,641.89	12,535.92	4,176.91	4,039.03	137.87	30.296
18,100.00	6,850.62	4,040.00	2,657.57	351.61	26.67	15.29	-1,641.89	12,535.92	4,175.29	4,037.20	138.09	30.235
18,180.13	6,850.64	4,040.00	2,657.57	354.03	26.67	15.29	-1,641.89	12,535.92	4,169.52	4,030.52	139.01	29.995
18,200.00	6,850.64	4,040.00	2,657.57	354.63	26.67	15.29	-1,641.89	12,535.92	4,168.33	4,029.10	139.23	29.938
18,279.51	6,850.66	4,040.00	2,657.57	357.03	26.67	15.29	-1,641.89	12,535.92	4,164.50	4,024.39	140.12	29.722
18,300.00	6,850.67	4,040.00	2,657.57	357.65	26.67	15.29	-1,641.89	12,535.92	4,163.76	4,023.42	140.34	29.669
18,378.88	6,850.69	4,040.00	2,657.57	360.04	26.67	15.29	-1,641.89	12,535.92	4,161.85	4,020.66	141.19	29.478
18,400.00	6,850.69	4,040.00	2,657.57	360.67	26.67	15.29	-1,641.89	12,535.92	4,161.59	4,020.18	141.41	29.429
18,440.42	6,850.70	4,040.00	2,657.57	361.90	26.67	15.29	-1,641.89	12,535.92	4,161.39	4,019.56	141.83	29.340 CC
18,500.00	6,850.72	4,040.00	2,657.57	363.70	26.67	15.29	-1,641.89	12,535.92	4,161.82	4,019.35	142.47	29.213 ES
18,600.00	6,850.74	4,040.00	2,657.57	366.72	26.67	15.29	-1,641.89	12,535.92	4,164.45	4,020.95	143.50	29.021
18,700.00	6,850.76	4,040.00	2,657.57	369.75	26.67	15.29	-1,641.89	12,535.92	4,169.48	4,024.99	144.49	28.856
18,800.00	6,850.79	4,040.00	2,657.57	372.77	26.67	15.29	-1,641.89	12,535.92	4,176.90	4,031.46	145.44	28.719
18,900.00	6,850.81	4,040.00	2,657.57	375.79	26.67	15.29	-1,641.89	12,535.92	4,186.69	4,040.35	146.35	28.608
19,000.00	6,850.84	4,040.00	2,657.57	378.82	26.67	15.29	-1,641.89	12,535.92	4,198.85	4,051.64	147.21	28.523
19,100.00	6,850.86	4,040.00	2,657.57	381.84	26.67	15.29	-1,641.89	12,535.92	4,213.34	4,065.32	148.02	28.465
19,200.00	6,850.89	4,040.00	2,657.57	384.87	26.67	15.29	-1,641.89	12,535.92	4,230.15	4,081.37	148.78	28.432
19,300.00	6,850.91	4,040.00	2,657.57	387.89	26.67	15.29	-1,641.89	12,535.92	4,249.24	4,099.76	149.49	28.425 SF
19,400.00	6,850.93	4,040.00	2,657.57	390.91	26.67	15.29	-1,641.89	12,535.92	4,270.60	4,120.46	150.14	28.444
19,500.00	6,850.96	4,040.00	2,657.57	393.94	26.67	15.29	-1,641.89	12,535.92	4,294.17	4,143.43	150.74	28.487
19,600.00	6,850.98	4,040.00	2,657.57	396.96	26.67	15.29	-1,641.89	12,535.92	4,319.93	4,168.65	151.28	28.556
19,673.90	6,851.00	4,040.00	2,657.57	399.20	26.67	15.29	-1,641.89	12,535.92	4,340.35	4,188.70	151.64	28.622
19,700.00	6,851.01	4,040.00	2,657.57	399.99	26.67	15.29	-1,641.89	12,535.92	4,347.84	4,196.07	151.77	28.648
19,773.90	6,851.02	4,040.00	2,657.57	402.22	26.67	15.29	-1,641.89	12,535.92	4,369.82	4,217.73	152.09	28.732

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit Com 150 - Lateral #1 ST #1 - As Drilled													Offset Site Error:	0.00 ft
Survey Program:		100-Standard Keeper, 2396-MWD SDI, 3366-MWD SDI						Rule Assigned:				Offset Well Error:	0.00 ft	
Reference	Offset	Semi Major Axis				Offset Wellbore Centre		Distance			Separation Factor	Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)			Minimum Separation (ft)	
0.00	0.00	5,125.00	2,613.25	0.00	42.57	92.57	-562.70	12,545.55	12,864.84					
100.00	100.00	5,125.00	2,613.25	0.30	42.57	92.57	-562.70	12,545.55	12,843.51	12,798.86	44.65	287.631		
200.00	200.00	5,125.00	2,613.25	0.66	42.57	92.57	-562.70	12,545.55	12,822.92	12,777.97	44.95	285.291		
300.00	300.00	5,125.00	2,613.25	1.01	42.57	92.57	-562.70	12,545.55	12,803.08	12,757.77	45.31	282.586		
400.00	400.00	5,125.00	2,613.25	1.37	42.57	92.57	-562.70	12,545.55	12,783.99	12,738.30	45.69	279.793		
500.00	500.00	5,125.00	2,613.25	1.73	42.57	92.57	-562.70	12,545.55	12,765.65	12,719.57	46.09	277.002		
600.00	599.98	5,125.00	2,613.25	2.08	42.57	-32.36	-562.70	12,545.55	12,746.63	12,700.15	46.48	274.258		
700.00	699.84	5,113.22	2,613.35	2.42	42.37	-32.53	-574.46	12,544.96	12,725.42	12,678.76	46.66	272.731		
800.00	799.45	5,112.47	2,613.36	2.77	42.36	-32.79	-575.21	12,544.93	12,702.13	12,655.09	47.04	270.033		
900.00	898.70	5,111.47	2,613.37	3.13	42.34	-33.07	-576.21	12,544.88	12,676.73	12,629.32	47.42	267.338		
963.97	961.95	5,110.70	2,613.38	3.37	42.33	-33.26	-576.98	12,544.85	12,659.39	12,611.73	47.66	265.602		
1,000.00	997.50	5,099.00	2,613.52	3.51	42.13	-33.21	-588.67	12,544.34	12,649.47	12,601.87	47.60	265.740		
1,100.00	1,096.19	4,859.21	2,616.99	3.90	38.10	-32.09	-828.02	12,530.74	12,622.11	12,578.33	43.78	288.281		
1,200.00	1,194.89	4,858.17	2,617.00	4.30	38.09	-32.08	-829.06	12,530.67	12,595.50	12,551.34	44.16	285.210		
1,300.00	1,293.58	4,857.13	2,617.02	4.70	38.07	-32.08	-830.10	12,530.60	12,569.63	12,525.09	44.54	282.184		
1,400.00	1,392.27	4,842.00	2,617.23	5.11	37.82	-32.00	-845.20	12,529.71	12,544.58	12,499.90	44.68	280.755		
1,500.00	1,490.96	4,842.00	2,617.23	5.52	37.82	-32.00	-845.20	12,529.71	12,520.19	12,475.10	45.09	277.693		
1,600.00	1,589.65	4,842.00	2,617.23	5.94	37.82	-32.00	-845.20	12,529.71	12,496.55	12,451.06	45.49	274.694		
1,700.00	1,688.34	4,842.00	2,617.23	6.36	37.82	-32.00	-845.20	12,529.71	12,473.67	12,427.77	45.90	271.759		
1,800.00	1,787.03	4,842.00	2,617.23	6.78	37.82	-32.00	-845.20	12,529.71	12,451.55	12,405.25	46.31	268.889		
1,900.00	1,885.73	4,842.00	2,617.23	7.20	37.82	-32.00	-845.20	12,529.71	12,430.20	12,383.49	46.72	266.086		
2,000.00	1,984.42	4,842.00	2,617.23	7.62	37.82	-32.00	-845.20	12,529.71	12,409.62	12,362.49	47.12	263.348		
2,100.00	2,083.11	4,842.00	2,617.23	8.04	37.82	-32.00	-845.20	12,529.71	12,389.81	12,342.28	47.53	260.675		
2,200.00	2,181.80	4,842.00	2,617.23	8.46	37.82	-32.00	-845.20	12,529.71	12,370.77	12,322.84	47.94	258.068		
2,300.00	2,280.49	4,487.00	2,617.14	8.89	31.96	-30.34	-1,199.22	12,504.45	12,352.51	12,310.35	42.16	292.994		
2,400.00	2,379.18	4,487.00	2,617.14	9.31	31.96	-30.34	-1,199.22	12,504.45	12,334.80	12,292.24	42.56	289.811		
2,500.00	2,477.87	4,487.00	2,617.14	9.74	31.96	-30.34	-1,199.22	12,504.45	12,317.88	12,274.92	42.96	286.712		
2,600.00	2,576.56	4,487.00	2,617.14	10.16	31.96	-30.34	-1,199.22	12,504.45	12,301.75	12,258.39	43.36	283.695		
2,700.00	2,675.26	4,487.00	2,617.14	10.59	31.96	-30.34	-1,199.22	12,504.45	12,286.41	12,242.65	43.76	280.759		
2,800.00	2,773.95	4,487.00	2,617.14	11.02	31.96	-30.34	-1,199.22	12,504.45	12,271.87	12,227.71	44.16	277.903		
2,900.00	2,872.64	4,475.80	2,616.91	11.44	31.78	-30.28	-1,210.38	12,503.51	12,258.12	12,213.76	44.36	276.338		
3,000.00	2,971.33	4,473.03	2,616.85	11.87	31.73	-30.27	-1,213.13	12,503.29	12,245.17	12,200.46	44.71	273.908		
3,100.00	3,070.02	4,470.23	2,616.80	12.30	31.69	-30.26	-1,215.93	12,503.06	12,233.02	12,187.97	45.05	271.549		
3,200.00	3,168.71	4,467.37	2,616.75	12.73	31.64	-30.24	-1,218.78	12,502.82	12,221.68	12,176.29	45.39	269.258		
3,300.00	3,267.40	4,464.47	2,616.70	13.16	31.59	-30.23	-1,221.67	12,502.58	12,211.15	12,165.42	45.73	267.034		
3,400.00	3,366.10	4,456.00	2,616.55	13.58	31.45	-30.19	-1,230.11	12,501.90	12,201.42	12,155.46	45.97	265.433		
3,500.00	3,464.79	4,456.00	2,616.55	14.01	31.45	-30.19	-1,230.11	12,501.90	12,192.51	12,146.15	46.35	263.035		
3,600.00	3,563.48	4,456.00	2,616.55	14.44	31.45	-30.19	-1,230.11	12,501.90	12,184.41	12,137.67	46.74	260.706		
3,700.00	3,662.17	4,456.00	2,616.55	14.87	31.45	-30.19	-1,230.11	12,501.90	12,177.12	12,130.00	47.12	258.444		
3,800.00	3,760.86	4,456.00	2,616.55	15.30	31.45	-30.19	-1,230.11	12,501.90	12,170.65	12,123.15	47.50	256.248		
3,900.00	3,859.55	4,456.00	2,616.55	15.73	31.45	-30.19	-1,230.11	12,501.90	12,165.00	12,117.13	47.87	254.117		
4,000.00	3,958.24	4,456.00	2,616.55	16.16	31.45	-30.19	-1,230.11	12,501.90	12,160.17	12,111.92	48.25	252.049		
4,100.00	4,056.94	4,444.73	2,616.40	16.59	31.27	-30.14	-1,241.35	12,501.00	12,156.14	12,107.72	48.42	251.048		
4,200.00	4,155.63	4,442.27	2,616.38	17.02	31.23	-30.13	-1,243.80	12,500.81	12,152.95	12,104.20	48.75	249.303		
4,300.00	4,254.32	4,439.70	2,616.36	17.45	31.18	-30.11	-1,246.36	12,500.61	12,150.57	12,101.50	49.07	247.621		
4,400.00	4,353.01	4,437.02	2,616.34	17.88	31.14	-30.10	-1,249.03	12,500.41	12,149.02	12,099.63	49.39	246.001		
4,500.00	4,451.70	4,434.23	2,616.33	18.30	31.10	-30.09	-1,251.81	12,500.20	12,148.29	12,098.59	49.70	244.441		
4,539.91	4,491.09	4,424.00	2,616.32	18.48	30.93	-30.04	-1,262.01	12,499.43	12,148.23	12,098.57	49.67	244.603		
4,600.00	4,550.39	4,424.00	2,616.32	18.73	30.93	-30.04	-1,262.01	12,499.43	12,148.38	12,098.50	49.88	243.555		
4,700.00	4,649.08	4,424.00	2,616.32	19.16	30.93	-30.04	-1,262.01	12,499.43	12,149.29	12,099.05	50.23	241.854		
4,800.00	4,747.77	4,424.00	2,616.32	19.59	30.93	-30.04	-1,262.01	12,499.43	12,151.02	12,100.43	50.59	240.207		
4,900.00	4,846.47	4,424.00	2,616.32	20.02	30.93	-30.04	-1,262.01	12,499.43	12,153.57	12,102.64	50.93	238.614		

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit Com 150 - Lateral #1 ST #1 - As Drilled													Offset Site Error:	0.00 ft
Survey Program: 100-Standard Keeper, 2396-MWD SDI, 3366-MWD SDI							Rule Assigned:						Offset Well Error:	0.00 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
5,000.00	4,945.16	4,424.00	2,616.32	20.45	30.93	-30.04	-1,262.01	12,499.43	12,156.94	12,105.66	51.28	237.074		
5,100.00	5,043.85	4,412.51	2,616.31	20.88	30.74	-29.99	-1,273.47	12,498.59	12,161.13	12,109.70	51.42	236.484		
5,200.00	5,142.54	4,408.65	2,616.29	21.31	30.68	-29.97	-1,277.32	12,498.30	12,166.13	12,114.44	51.70	235.331		
5,300.00	5,241.23	4,405.00	2,616.27	21.74	30.62	-29.95	-1,280.96	12,498.03	12,171.96	12,119.99	51.97	234.204		
5,400.00	5,339.92	4,401.53	2,616.24	22.17	30.56	-29.93	-1,284.42	12,497.78	12,178.60	12,126.35	52.25	233.105		
5,500.00	5,438.61	4,392.00	2,616.12	22.61	30.41	-29.89	-1,293.92	12,497.07	12,186.06	12,133.64	52.41	232.504		
5,600.00	5,537.31	4,392.00	2,616.12	23.04	30.41	-29.89	-1,293.92	12,497.07	12,194.32	12,141.58	52.74	231.222		
5,700.00	5,636.00	4,392.00	2,616.12	23.47	30.41	-29.89	-1,293.92	12,497.07	12,203.40	12,150.34	53.06	229.986		
5,800.00	5,734.69	4,392.00	2,616.12	23.90	30.41	-29.89	-1,293.92	12,497.07	12,213.30	12,159.91	53.38	228.795		
5,900.00	5,833.38	4,392.00	2,616.12	24.33	30.41	-29.89	-1,293.92	12,497.07	12,224.00	12,170.30	53.70	227.648		
6,000.00	5,932.07	4,392.00	2,616.12	24.76	30.41	-29.89	-1,293.92	12,497.07	12,235.51	12,181.50	54.01	226.544		
6,100.00	6,030.76	4,392.00	2,616.12	25.19	30.41	-29.89	-1,293.92	12,497.07	12,247.82	12,193.51	54.32	225.481		
6,200.00	6,129.45	4,392.00	2,616.12	25.62	30.41	-29.89	-1,293.92	12,497.07	12,260.94	12,206.32	54.62	224.460		
6,300.00	6,228.15	4,392.00	2,616.12	26.05	30.41	-29.89	-1,293.92	12,497.07	12,274.86	12,219.94	54.93	223.479		
6,370.81	6,298.03	4,392.00	2,616.12	26.35	30.41	-29.89	-1,293.92	12,497.07	12,285.20	12,230.06	55.14	222.809		
6,400.00	6,326.74	4,380.06	2,615.94	26.48	30.21	-22.39	-1,305.83	12,496.20	12,288.90	12,233.87	55.02	223.333		
6,450.00	6,375.33	4,379.27	2,615.93	26.73	30.20	-14.85	-1,306.61	12,496.15	12,292.34	12,237.18	55.16	222.832		
6,500.00	6,422.93	4,378.57	2,615.92	26.99	30.19	-10.51	-1,307.31	12,496.10	12,292.08	12,236.77	55.31	222.248		
6,550.00	6,469.25	4,377.97	2,615.91	27.29	30.18	-7.71	-1,307.92	12,496.06	12,288.12	12,232.67	55.46	221.587		
6,600.00	6,513.99	4,377.45	2,615.91	27.61	30.17	-5.75	-1,308.43	12,496.02	12,280.48	12,224.87	55.60	220.859		
6,650.00	6,556.88	4,377.04	2,615.90	27.96	30.16	-4.28	-1,308.84	12,495.99	12,269.19	12,213.44	55.75	220.070		
6,700.00	6,597.66	4,376.74	2,615.90	28.34	30.16	-3.12	-1,309.15	12,495.97	12,254.33	12,198.43	55.90	219.230		
6,750.00	6,636.07	4,376.53	2,615.90	28.76	30.16	-2.15	-1,309.35	12,495.96	12,235.96	12,179.92	56.04	218.347		
6,800.00	6,671.88	4,376.44	2,615.89	29.21	30.15	-1.31	-1,309.44	12,495.95	12,214.19	12,158.01	56.18	217.427		
6,850.00	6,704.87	4,376.46	2,615.89	29.71	30.15	-0.54	-1,309.42	12,495.95	12,189.13	12,132.82	56.31	216.479		
6,900.00	6,734.84	4,376.59	2,615.90	30.25	30.16	0.20	-1,309.29	12,495.96	12,160.91	12,104.49	56.43	215.509		
6,950.00	6,761.59	4,376.83	2,615.90	30.85	30.16	0.95	-1,309.05	12,495.98	12,129.70	12,073.16	56.54	214.526		
7,000.00	6,784.97	4,377.18	2,615.90	31.50	30.17	1.74	-1,308.70	12,496.00	12,095.65	12,039.01	56.65	213.534		
7,050.00	6,804.83	4,377.65	2,615.91	32.20	30.17	2.61	-1,308.24	12,496.03	12,058.96	12,002.23	56.74	212.541		
7,100.00	6,821.05	4,378.22	2,615.92	32.96	30.18	3.62	-1,307.67	12,496.07	12,019.83	11,963.01	56.82	211.550		
7,150.00	6,833.53	4,378.90	2,615.93	33.77	30.19	4.84	-1,306.99	12,496.12	11,978.48	11,921.59	56.89	210.567		
7,200.00	6,842.18	4,379.69	2,615.94	34.62	30.21	6.41	-1,306.20	12,496.18	11,935.14	11,878.19	56.94	209.595		
7,250.00	6,846.97	4,392.00	2,616.12	35.52	30.41	8.39	-1,293.92	12,497.07	11,890.07	11,832.89	57.18	207.941		
7,286.15	6,848.00	4,392.00	2,616.12	36.18	30.41	10.47	-1,293.92	12,497.07	11,856.53	11,799.34	57.20	207.299		
7,300.00	6,848.00	4,392.00	2,616.12	36.44	30.41	10.47	-1,293.92	12,497.07	11,843.55	11,786.35	57.20	207.055		
7,400.00	6,848.03	4,392.00	2,616.12	38.40	30.41	10.47	-1,293.92	12,497.07	11,749.86	11,692.63	57.22	205.333		
7,500.00	6,848.05	4,392.00	2,616.12	40.49	30.41	10.47	-1,293.92	12,497.07	11,656.27	11,599.02	57.25	203.596		
7,600.00	6,848.08	4,392.00	2,616.12	42.70	30.41	10.47	-1,293.92	12,497.07	11,562.80	11,505.51	57.29	201.845		
7,700.00	6,848.10	4,392.00	2,616.12	45.01	30.41	10.47	-1,293.92	12,497.07	11,469.43	11,412.10	57.32	200.078		
7,800.00	6,848.12	4,392.00	2,616.12	47.40	30.41	10.47	-1,293.92	12,497.07	11,376.17	11,318.80	57.37	198.297		
7,900.00	6,848.15	4,392.00	2,616.12	49.86	30.41	10.47	-1,293.92	12,497.07	11,283.03	11,225.61	57.42	196.501		
8,000.00	6,848.17	4,392.00	2,616.12	52.39	30.41	10.47	-1,293.92	12,497.07	11,190.01	11,132.54	57.48	194.691		
8,100.00	6,848.20	4,392.00	2,616.12	54.96	30.41	10.47	-1,293.92	12,497.07	11,097.11	11,039.58	57.54	192.865		
8,200.00	6,848.22	4,392.00	2,616.12	57.58	30.41	10.47	-1,293.92	12,497.07	11,004.34	10,946.73	57.61	191.025		
8,300.00	6,848.25	4,404.74	2,616.27	60.24	30.61	10.29	-1,281.22	12,498.01	10,911.67	10,853.78	57.89	188.482		
8,400.00	6,848.27	4,407.28	2,616.29	62.94	30.66	10.26	-1,278.69	12,498.20	10,819.14	10,761.13	58.02	186.488		
8,500.00	6,848.29	4,409.81	2,616.30	65.66	30.70	10.22	-1,276.16	12,498.39	10,726.75	10,668.61	58.14	184.484		
8,600.00	6,848.32	4,412.34	2,616.31	68.42	30.74	10.19	-1,273.64	12,498.57	10,634.49	10,576.21	58.28	182.470		
8,700.00	6,848.34	4,424.00	2,616.32	71.19	30.93	10.03	-1,262.01	12,499.43	10,542.39	10,483.81	58.57	179.990		
8,800.00	6,848.37	4,424.00	2,616.32	73.99	30.93	10.03	-1,262.01	12,499.43	10,450.40	10,391.72	58.68	178.091		
8,900.00	6,848.39	4,424.00	2,616.32	76.80	30.93	10.03	-1,262.01	12,499.43	10,358.57	10,299.78	58.80	176.180		
9,000.00	6,848.42	4,424.00	2,616.32	79.63	30.93	10.03	-1,262.01	12,499.43	10,266.89	10,207.97	58.92	174.256		

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit Com 150 - Lateral #1 ST #1 - As Drilled													Offset Site Error:	0.00 ft
Survey Program:		100-Standard Keeper, 2396-MWD SDI, 3366-MWD SDI						Rule Assigned:		Offset Well Error:		0.00 ft		
Reference		Offset		Semi Major Axis		Offset Wellbore Centre		Distance		Warning				
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
9,100.00	6,848.44	4,427.96	2,616.32	82.47	30.99	9.98	-1,258.06	12,499.73	10,175.37	10,116.26	59.11	172.136		
9,200.00	6,848.46	4,438.90	2,616.35	85.33	31.17	9.83	-1,247.16	12,500.55	10,084.00	10,024.57	59.42	169.693		
9,300.00	6,848.49	4,450.55	2,616.47	88.20	31.36	9.67	-1,235.54	12,501.46	9,992.79	9,933.03	59.75	167.229		
9,400.00	6,848.51	4,459.72	2,616.61	91.08	31.51	9.54	-1,226.40	12,502.20	9,901.73	9,841.68	60.05	164.885		
9,500.00	6,848.54	4,466.53	2,616.73	93.97	31.62	9.45	-1,219.62	12,502.75	9,810.85	9,750.53	60.32	162.647		
9,600.00	6,848.56	4,473.44	2,616.86	96.87	31.74	9.36	-1,212.73	12,503.32	9,720.14	9,659.54	60.60	160.408		
9,700.00	6,848.58	4,480.48	2,617.00	99.77	31.86	9.26	-1,205.72	12,503.90	9,629.60	9,568.72	60.88	158.170		
9,800.00	6,848.61	4,487.00	2,617.14	102.69	31.96	9.17	-1,199.22	12,504.45	9,539.25	9,478.09	61.17	155.958		
9,900.00	6,848.63	4,487.00	2,617.14	105.61	31.96	9.17	-1,199.22	12,504.45	9,449.09	9,387.74	61.36	154.003		
10,000.00	6,848.66	4,487.00	2,617.14	108.53	31.96	9.17	-1,199.22	12,504.45	9,359.14	9,297.58	61.56	152.040		
10,100.00	6,848.68	4,487.00	2,617.14	111.46	31.96	9.17	-1,199.22	12,504.45	9,269.38	9,207.61	61.77	150.070		
10,200.00	6,848.71	4,487.00	2,617.14	114.40	31.96	9.17	-1,199.22	12,504.45	9,179.84	9,117.85	61.99	148.093		
10,300.00	6,848.73	4,487.00	2,617.14	117.34	31.96	9.17	-1,199.22	12,504.45	9,090.52	9,028.30	62.22	146.111		
10,400.00	6,848.75	4,499.28	2,617.38	120.29	32.16	9.00	-1,186.99	12,505.49	9,001.38	8,938.75	62.63	143.717		
10,500.00	6,848.78	4,501.38	2,617.42	123.24	32.20	8.97	-1,184.90	12,505.67	8,912.50	8,849.59	62.91	141.671		
10,600.00	6,848.80	4,503.50	2,617.45	126.20	32.23	8.94	-1,182.79	12,505.86	8,823.86	8,760.66	63.20	139.625		
10,700.00	6,848.83	4,505.64	2,617.49	129.16	32.27	8.91	-1,180.65	12,506.05	8,735.45	8,671.96	63.49	137.579		
10,800.00	6,848.85	4,519.00	2,617.66	132.12	32.49	8.73	-1,167.35	12,507.25	8,647.33	8,583.38	63.95	135.211		
10,900.00	6,848.88	4,519.00	2,617.66	135.08	32.49	8.73	-1,167.35	12,507.25	8,559.43	8,495.19	64.24	133.241		
11,000.00	6,848.90	4,519.00	2,617.66	138.05	32.49	8.73	-1,167.35	12,507.25	8,471.79	8,407.26	64.54	131.270		
11,100.00	6,848.92	4,519.00	2,617.66	141.02	32.49	8.73	-1,167.35	12,507.25	8,384.43	8,319.59	64.85	129.299		
11,200.00	6,848.95	4,519.00	2,617.66	144.00	32.49	8.73	-1,167.35	12,507.25	8,297.36	8,232.19	65.17	127.328		
11,300.00	6,848.97	4,519.21	2,617.67	146.97	32.49	8.73	-1,167.13	12,507.27	8,210.58	8,145.08	65.50	125.353		
11,400.00	6,849.00	4,528.64	2,617.77	149.95	32.64	8.60	-1,157.75	12,508.13	8,124.10	8,058.14	65.96	123.173		
11,500.00	6,849.02	4,537.96	2,617.86	152.93	32.80	8.47	-1,148.47	12,508.97	8,037.92	7,971.50	66.42	121.016		
11,600.00	6,849.04	4,547.18	2,617.94	155.91	32.95	8.34	-1,139.28	12,509.80	7,952.06	7,885.17	66.89	118.883		
11,700.00	6,849.07	4,552.00	2,617.98	158.90	33.02	8.28	-1,134.48	12,510.24	7,866.52	7,799.20	67.32	116.858		
11,800.00	6,849.09	4,552.00	2,617.98	161.88	33.02	8.28	-1,134.48	12,510.24	7,781.32	7,713.62	67.70	114.937		
11,900.00	6,849.12	4,561.46	2,618.05	164.87	33.18	8.15	-1,125.06	12,511.08	7,696.46	7,628.26	68.20	112.852		
12,000.00	6,849.14	4,565.30	2,618.06	167.86	33.24	8.09	-1,121.24	12,511.43	7,611.98	7,543.33	68.65	110.887		
12,100.00	6,849.17	4,809.00	2,617.64	170.85	37.26	4.70	-878.15	12,528.06	7,527.81	7,455.83	71.98	104.585		
12,200.00	6,849.19	4,809.00	2,617.64	173.84	37.26	4.70	-878.15	12,528.06	7,443.87	7,371.53	72.34	102.904		
12,300.00	6,849.21	4,809.00	2,617.64	176.84	37.26	4.70	-878.15	12,528.06	7,360.32	7,287.61	72.71	101.229		
12,400.00	6,849.24	4,809.00	2,617.64	179.83	37.26	4.70	-878.15	12,528.06	7,277.19	7,204.10	73.09	99.562		
12,500.00	6,849.26	4,809.00	2,617.64	182.83	37.26	4.70	-878.15	12,528.06	7,194.49	7,121.00	73.49	97.904		
12,600.00	6,849.29	4,809.00	2,617.64	185.82	37.26	4.70	-878.15	12,528.06	7,112.23	7,038.34	73.89	96.254		
12,700.00	6,849.31	4,809.00	2,617.64	188.82	37.26	4.70	-878.15	12,528.06	7,030.43	6,956.13	74.31	94.614		
12,800.00	6,849.34	4,809.00	2,617.64	191.82	37.26	4.70	-878.15	12,528.06	6,949.11	6,874.38	74.73	92.984		
12,900.00	6,849.36	4,809.00	2,617.64	194.82	37.26	4.70	-878.15	12,528.06	6,868.28	6,793.11	75.17	91.365		
13,000.00	6,849.38	4,821.21	2,617.52	197.82	37.47	4.53	-865.96	12,528.64	6,787.93	6,712.16	75.77	89.591		
13,100.00	6,849.41	4,822.64	2,617.51	200.83	37.49	4.51	-864.53	12,528.71	6,708.13	6,631.89	76.24	87.986		
13,200.00	6,849.43	4,824.10	2,617.49	203.83	37.52	4.49	-863.07	12,528.78	6,628.88	6,552.15	76.73	86.394		
13,300.00	6,849.46	4,825.58	2,617.47	206.83	37.54	4.47	-861.59	12,528.85	6,550.20	6,472.97	77.23	84.818		
13,400.00	6,849.48	4,827.08	2,617.45	209.84	37.57	4.45	-860.09	12,528.93	6,472.10	6,394.36	77.74	83.257		
13,500.00	6,849.50	4,828.61	2,617.43	212.84	37.59	4.43	-858.56	12,529.00	6,394.61	6,316.35	78.26	81.712		
13,600.00	6,849.53	4,830.17	2,617.41	215.85	37.62	4.41	-857.01	12,529.08	6,317.75	6,238.96	78.79	80.185		
13,700.00	6,849.55	4,842.00	2,617.23	218.86	37.82	4.24	-845.20	12,529.71	6,241.58	6,162.15	79.43	78.578		
13,800.00	6,849.58	4,842.00	2,617.23	221.87	37.82	4.24	-845.20	12,529.71	6,166.05	6,086.08	79.97	77.107		
13,900.00	6,849.60	4,842.00	2,617.23	224.87	37.82	4.24	-845.20	12,529.71	6,091.22	6,010.71	80.51	75.653		
14,000.00	6,849.63	4,842.00	2,617.23	227.88	37.82	4.24	-845.20	12,529.71	6,017.13	5,936.05	81.07	74.217		
14,100.00	6,849.65	4,842.00	2,617.23	230.89	37.82	4.24	-845.20	12,529.71	5,943.79	5,862.14	81.65	72.800		
14,200.00	6,849.67	4,842.00	2,617.23	233.90	37.82	4.24	-845.20	12,529.71	5,871.24	5,789.01	82.23	71.403		

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit Com 150 - Lateral #1 ST #1 - As Drilled													Offset Site Error:	0.00 ft	
Survey Program: 100-Standard Keeper, 2396-MWD SDI, 3366-MWD SDI							Rule Assigned:							Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Offset Wellbore Centre		Distance				Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor			
14,300.00	6,849.70	4,842.00	2,617.23	236.92	37.82	4.24	-845.20	12,529.71	5,799.51	5,716.69	82.82	70.025			
14,399.93	6,849.72	4,842.00	2,617.23	239.92	37.82	4.24	-845.20	12,529.71	5,728.67	5,645.25	83.42	68.670			
14,400.00	6,849.72	4,842.00	2,617.23	239.93	37.82	4.24	-845.20	12,529.71	5,728.62	5,645.20	83.42	68.669			
14,499.52	6,849.75	4,842.00	2,617.23	242.92	37.82	4.24	-845.20	12,529.71	5,658.95	5,574.92	84.04	67.340			
14,500.00	6,849.75	4,842.00	2,617.23	242.94	37.82	4.24	-845.20	12,529.71	5,658.62	5,574.58	84.04	67.334			
14,599.10	6,849.77	4,842.00	2,617.23	245.92	37.82	4.24	-845.20	12,529.71	5,590.14	5,505.49	84.66	66.033			
14,600.00	6,849.77	4,842.00	2,617.23	245.95	37.82	4.24	-845.20	12,529.71	5,589.52	5,504.86	84.66	66.021			
14,698.68	6,849.80	4,851.99	2,617.08	248.92	37.98	4.10	-835.23	12,530.28	5,522.25	5,436.91	85.34	64.706			
14,700.00	6,849.80	4,852.03	2,617.08	248.96	37.98	4.10	-835.19	12,530.29	5,521.36	5,436.01	85.35	64.689			
14,798.25	6,849.82	4,854.90	2,617.05	251.93	38.03	4.06	-832.32	12,530.46	5,455.35	5,369.35	86.00	63.438			
14,800.00	6,849.82	4,854.95	2,617.04	251.98	38.03	4.06	-832.27	12,530.47	5,454.18	5,368.17	86.01	63.416			
14,897.82	6,849.84	4,857.98	2,617.01	254.93	38.08	4.01	-829.24	12,530.66	5,389.45	5,302.79	86.65	62.195			
14,900.00	6,849.84	4,858.05	2,617.01	254.99	38.08	4.01	-829.17	12,530.66	5,388.02	5,301.35	86.67	62.169			
14,997.39	6,849.87	4,861.26	2,616.97	257.93	38.14	3.97	-825.98	12,530.87	5,324.59	5,237.28	87.32	60.979			
15,000.00	6,849.87	4,861.34	2,616.97	258.01	38.14	3.97	-825.89	12,530.88	5,322.91	5,235.57	87.34	60.948			
15,096.95	6,849.89	4,864.73	2,616.93	260.93	38.20	3.92	-822.51	12,531.11	5,260.82	5,172.84	87.99	59.791			
15,100.00	6,849.89	4,864.84	2,616.93	261.02	38.20	3.92	-822.40	12,531.11	5,258.89	5,170.88	88.01	59.755			
15,196.51	6,849.92	4,886.29	2,616.80	263.93	38.56	3.62	-801.00	12,532.66	5,198.16	5,109.43	88.74	58.580			
15,200.00	6,849.92	4,886.55	2,616.80	264.04	38.56	3.61	-800.75	12,532.67	5,195.99	5,107.23	88.76	58.540			
15,296.08	6,849.94	4,921.15	2,616.73	266.93	39.14	3.13	-766.24	12,535.12	5,136.65	5,047.09	89.55	57.358			
15,300.00	6,849.94	4,921.54	2,616.73	267.05	39.15	3.12	-765.84	12,535.15	5,134.24	5,044.66	89.58	57.314			
15,395.62	6,849.96	4,930.98	2,616.73	269.94	39.30	2.99	-756.43	12,535.78	5,076.29	4,986.05	90.25	56.249			
15,400.00	6,849.97	4,931.40	2,616.72	270.07	39.31	2.98	-756.01	12,535.80	5,073.67	4,983.39	90.28	56.201			
15,495.17	6,849.99	4,940.29	2,616.71	272.94	39.46	2.86	-747.14	12,536.38	5,017.18	4,926.24	90.94	55.173			
15,500.00	6,849.99	4,940.73	2,616.71	273.08	39.47	2.85	-746.70	12,536.41	5,014.34	4,923.37	90.97	55.122			
15,594.70	6,850.01	4,938.00	2,616.71	275.94	39.42	2.89	-749.42	12,536.23	4,959.36	4,867.80	91.56	54.163			
15,600.00	6,850.01	4,938.00	2,616.71	276.10	39.42	2.89	-749.42	12,536.23	4,956.32	4,864.72	91.60	54.109			
15,694.23	6,850.04	4,938.00	2,616.71	278.94	39.42	2.89	-749.42	12,536.23	4,902.89	4,810.68	92.21	53.173			
15,700.00	6,850.04	4,938.00	2,616.71	279.12	39.42	2.89	-749.42	12,536.23	4,899.65	4,807.41	92.24	53.117			
15,793.75	6,850.06	4,948.19	2,616.68	281.95	39.59	2.75	-739.25	12,536.88	4,847.77	4,754.89	92.89	52.189			
15,800.00	6,850.06	4,948.38	2,616.68	282.14	39.59	2.74	-739.06	12,536.89	4,844.36	4,751.43	92.93	52.129			
15,893.27	6,850.08	4,951.22	2,616.66	284.95	39.64	2.70	-736.23	12,537.07	4,794.11	4,700.57	93.54	51.253			
15,900.00	6,850.09	4,951.42	2,616.66	285.15	39.65	2.70	-736.03	12,537.08	4,790.53	4,696.95	93.58	51.191			
15,992.77	6,850.11	4,954.19	2,616.64	287.95	39.69	2.66	-733.26	12,537.25	4,741.92	4,647.74	94.18	50.349			
16,000.00	6,850.11	4,954.41	2,616.63	288.17	39.70	2.66	-733.05	12,537.26	4,738.19	4,643.96	94.23	50.284			
16,092.27	6,850.13	4,957.12	2,616.61	290.96	39.74	2.62	-730.34	12,537.43	4,691.27	4,596.45	94.82	49.476			
16,100.00	6,850.13	4,957.34	2,616.61	291.19	39.74	2.62	-730.12	12,537.44	4,687.40	4,592.53	94.87	49.409			
16,191.77	6,850.16	4,960.00	2,616.58	293.96	39.79	2.58	-727.47	12,537.60	4,642.19	4,546.74	95.45	48.634			
16,200.00	6,850.16	4,960.24	2,616.58	294.21	39.79	2.58	-727.23	12,537.62	4,638.20	4,542.70	95.50	48.566			
16,291.25	6,850.18	4,970.00	2,616.46	296.96	39.96	2.44	-717.48	12,538.20	4,594.76	4,498.67	96.09	47.816			
16,300.00	6,850.18	4,970.00	2,616.46	297.23	39.96	2.44	-717.48	12,538.20	4,590.67	4,494.52	96.15	47.746			
16,390.73	6,850.21	4,970.00	2,616.46	299.97	39.96	2.44	-717.48	12,538.20	4,548.99	4,452.29	96.70	47.043			
16,400.00	6,850.21	4,970.00	2,616.46	300.25	39.96	2.44	-717.48	12,538.20	4,544.81	4,448.05	96.76	46.972			
16,490.20	6,850.23	4,970.00	2,616.46	302.97	39.96	2.44	-717.48	12,538.20	4,504.95	4,407.65	97.30	46.301			
16,500.00	6,850.23	4,970.00	2,616.46	303.27	39.96	2.44	-717.48	12,538.20	4,500.71	4,403.35	97.36	46.229			
16,589.66	6,850.25	4,970.00	2,616.46	305.97	39.96	2.44	-717.48	12,538.20	4,462.70	4,364.82	97.89	45.590			
16,600.00	6,850.26	4,970.00	2,616.46	306.28	39.96	2.44	-717.48	12,538.20	4,458.41	4,360.46	97.95	45.518			
16,689.11	6,850.28	4,975.95	2,616.37	308.98	40.06	2.36	-711.55	12,538.54	4,422.28	4,323.81	98.47	44.908			
16,700.00	6,850.28	4,976.40	2,616.37	309.30	40.06	2.35	-711.10	12,538.57	4,417.97	4,319.43	98.54	44.835			
16,788.55	6,850.30	4,979.99	2,616.31	311.98	40.13	2.30	-707.52	12,538.77	4,383.75	4,284.70	99.05	44.260			
16,800.00	6,850.30	4,980.44	2,616.30	312.32	40.13	2.29	-707.06	12,538.80	4,379.43	4,280.32	99.11	44.187			
16,887.99	6,850.33	4,983.86	2,616.24	314.98	40.19	2.25	-703.65	12,538.98	4,347.14	4,247.54	99.60	43.644			

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit Com 150 - Lateral #1 ST #1 - As Drilled											Offset Site Error:	0.00 ft
Survey Program: 100-Standard Keeper, 2396-MWD SDI, 3366-MWD SDI											Offset Well Error:	0.00 ft
Reference											Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (ft)	Separation Factor
							+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)		
16,900.00	6,850.33	4,984.32	2,616.23	315.35	40.20	2.24	-703.19	12,539.01	4,342.85	4,243.18	99.67	43.572
16,987.42	6,850.35	4,987.59	2,616.18	317.99	40.25	2.19	-699.93	12,539.19	4,312.52	4,212.37	100.15	43.061
17,000.00	6,850.35	4,988.05	2,616.17	318.37	40.26	2.19	-699.47	12,539.21	4,308.28	4,208.06	100.22	42.990
17,086.84	6,850.37	4,991.16	2,616.11	320.99	40.31	2.14	-696.36	12,539.37	4,279.92	4,179.24	100.68	42.510
17,100.00	6,850.38	4,991.63	2,616.10	321.39	40.32	2.14	-695.89	12,539.40	4,275.76	4,175.01	100.75	42.440
17,186.25	6,850.40	4,994.61	2,616.04	323.99	40.37	2.09	-692.92	12,539.55	4,249.40	4,148.20	101.20	41.991
17,200.00	6,850.40	4,995.07	2,616.03	324.41	40.38	2.09	-692.45	12,539.58	4,245.34	4,144.07	101.27	41.921
17,285.65	6,850.42	5,002.00	2,615.89	327.00	40.50	1.99	-685.54	12,539.92	4,221.00	4,119.29	101.70	41.503
17,300.00	6,850.43	5,002.00	2,615.89	327.43	40.50	1.99	-685.54	12,539.92	4,217.08	4,115.30	101.78	41.435
17,385.05	6,850.45	5,002.00	2,615.89	330.00	40.50	1.99	-685.54	12,539.92	4,194.75	4,092.55	102.20	41.044
17,400.00	6,850.45	5,002.00	2,615.89	330.45	40.50	1.99	-685.54	12,539.92	4,191.00	4,088.72	102.28	40.978
17,484.44	6,850.47	5,002.00	2,615.89	333.00	40.50	1.99	-685.54	12,539.92	4,170.71	4,068.02	102.69	40.614
17,500.00	6,850.47	5,002.00	2,615.89	333.47	40.50	1.99	-685.54	12,539.92	4,167.15	4,064.38	102.77	40.549
17,583.82	6,850.49	5,002.00	2,615.89	336.00	40.50	1.99	-685.54	12,539.92	4,148.92	4,045.74	103.18	40.211
17,600.00	6,850.50	5,002.00	2,615.89	336.49	40.50	1.99	-685.54	12,539.92	4,145.59	4,042.33	103.26	40.148
17,683.20	6,850.52	5,002.00	2,615.89	339.01	40.50	1.99	-685.54	12,539.92	4,129.40	4,025.74	103.66	39.835
17,700.00	6,850.52	5,002.00	2,615.89	339.52	40.50	1.99	-685.54	12,539.92	4,126.33	4,022.58	103.75	39.774
17,782.58	6,850.54	5,002.00	2,615.89	342.01	40.50	1.99	-685.54	12,539.92	4,112.20	4,008.05	104.15	39.484
17,800.00	6,850.55	5,002.00	2,615.89	342.54	40.50	1.99	-685.54	12,539.92	4,109.42	4,005.18	104.23	39.425
17,881.95	6,850.57	5,002.00	2,615.89	345.01	40.50	1.99	-685.54	12,539.92	4,097.33	3,992.69	104.64	39.157
17,900.00	6,850.57	5,002.00	2,615.89	345.56	40.50	1.99	-685.54	12,539.92	4,094.88	3,990.15	104.73	39.100
17,981.32	6,850.59	5,002.00	2,615.89	348.02	40.50	1.99	-685.54	12,539.92	4,084.82	3,979.69	105.13	38.853
18,000.00	6,850.59	5,002.00	2,615.89	348.58	40.50	1.99	-685.54	12,539.92	4,082.74	3,977.51	105.23	38.799
18,080.68	6,850.61	5,002.00	2,615.89	351.02	40.50	1.99	-685.54	12,539.92	4,074.71	3,969.07	105.64	38.571
18,100.00	6,850.62	5,002.00	2,615.89	351.61	40.50	1.99	-685.54	12,539.92	4,073.02	3,967.28	105.74	38.519
18,180.06	6,850.64	5,013.64	2,615.60	354.03	40.69	1.83	-673.91	12,540.49	4,066.94	3,960.82	106.12	38.325
18,200.00	6,850.64	5,013.94	2,615.59	354.63	40.70	1.82	-673.61	12,540.50	4,065.68	3,959.45	106.22	38.276
18,279.40	6,850.66	5,015.12	2,615.55	357.03	40.72	1.80	-672.43	12,540.56	4,061.62	3,954.98	106.64	38.087
18,300.00	6,850.67	5,015.43	2,615.54	357.65	40.72	1.80	-672.13	12,540.58	4,060.83	3,954.07	106.75	38.040
18,378.66	6,850.69	5,016.59	2,615.51	360.03	40.74	1.78	-670.97	12,540.63	4,058.74	3,951.56	107.18	37.868
18,400.00	6,850.69	5,016.91	2,615.50	360.67	40.75	1.78	-670.65	12,540.65	4,058.43	3,951.13	107.30	37.823 CC
18,500.00	6,850.72	5,018.38	2,615.45	363.70	40.77	1.76	-669.18	12,540.72	4,058.50	3,950.61	107.89	37.616 ES
18,600.00	6,850.74	5,019.85	2,615.41	366.72	40.80	1.74	-667.72	12,540.79	4,061.03	3,952.50	108.53	37.418
18,700.00	6,850.76	5,112.19	2,613.38	369.75	42.36	0.44	-575.49	12,544.96	4,066.03	3,956.87	109.16	37.250
18,800.00	6,850.79	5,165.42	2,613.12	372.77	43.26	-0.31	-522.33	12,547.69	4,073.32	3,963.22	110.10	36.996
18,900.00	6,850.81	5,190.84	2,613.21	375.79	43.69	-0.67	-496.95	12,549.03	4,083.00	3,972.02	110.98	36.789
19,000.00	6,850.84	5,166.65	2,613.18	378.82	43.28	-0.33	-521.11	12,547.75	4,095.08	3,983.64	111.44	36.748
19,100.00	6,850.86	5,172.13	2,613.18	381.84	43.37	-0.41	-515.63	12,548.04	4,109.59	3,997.44	112.15	36.645
19,200.00	6,850.89	5,177.62	2,613.17	384.87	43.46	-0.49	-510.16	12,548.33	4,126.46	4,013.61	112.85	36.565
19,300.00	6,850.91	5,181.00	2,613.16	387.89	43.52	-0.53	-506.78	12,548.51	4,145.68	4,032.15	113.53	36.516
19,400.00	6,850.93	5,181.00	2,613.16	390.91	43.52	-0.53	-506.78	12,548.51	4,167.20	4,053.04	114.17	36.501 SF
19,500.00	6,850.96	5,181.00	2,613.16	393.94	43.52	-0.53	-506.78	12,548.51	4,191.00	4,076.22	114.78	36.513
19,600.00	6,850.98	5,181.00	2,613.16	396.96	43.52	-0.53	-506.78	12,548.51	4,217.04	4,101.67	115.37	36.552
19,673.90	6,851.00	5,181.00	2,613.16	399.20	43.52	-0.53	-506.78	12,548.51	4,237.70	4,121.90	115.79	36.598
19,700.00	6,851.01	5,181.00	2,613.16	399.99	43.52	-0.53	-506.78	12,548.51	4,245.27	4,129.34	115.94	36.618
19,773.90	6,851.02	5,181.00	2,613.16	402.22	43.52	-0.53	-506.78	12,548.51	4,267.53	4,151.19	116.33	36.684

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit Com 150 - Original Hole - As Drilled														Offset Site Error:	0.00 ft
Survey Program: 100-Standard Keeper														Offset Well Error:	0.00 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning		
0.00	0.00	0.00	0.00	0.00	0.00	104.08	-3,142.94	12,532.69	12,922.02						
100.00	100.00	0.00	0.00	0.30	0.00	104.08	-3,142.94	12,532.69	12,921.02	12,920.72	0.30	N/A			
179.00	179.00	0.00	0.00	0.58	0.00	104.08	-3,142.94	12,532.69	12,920.78	12,920.20	0.58	N/A			
200.00	200.00	0.00	0.00	0.66	0.00	104.08	-3,142.94	12,532.69	12,920.80	12,920.14	0.66	N/A			
300.00	300.00	58.83	58.83	1.01	0.05	104.08	-3,142.97	12,532.83	12,921.07	12,920.00	1.07	N/A			
400.00	400.00	115.17	115.17	1.37	0.11	104.08	-3,143.04	12,533.22	12,921.75	12,920.26	1.48	8,723.235			
500.00	500.00	258.74	258.74	1.73	0.28	104.08	-3,143.36	12,534.15	12,922.44	12,920.43	2.01	6,428.885			
600.00	599.98	392.31	392.30	2.08	0.43	-20.65	-3,143.25	12,534.56	12,921.06	12,918.56	2.49	5,184.798			
700.00	699.84	492.47	492.46	2.42	0.54	-20.69	-3,143.24	12,534.79	12,916.38	12,913.44	2.95	4,382.944			
800.00	799.45	585.88	585.87	2.77	0.65	-20.76	-3,143.37	12,534.99	12,908.47	12,905.06	3.41	3,785.804			
900.00	898.70	666.26	666.25	3.13	0.75	-20.86	-3,143.54	12,535.22	12,897.40	12,893.54	3.86	3,339.482			
963.97	961.95	731.12	731.11	3.37	0.81	-20.93	-3,143.84	12,535.44	12,888.69	12,884.53	4.16	3,096.963			
1,000.00	997.50	785.23	785.22	3.51	0.86	-20.95	-3,144.20	12,535.54	12,883.38	12,879.03	4.34	2,968.020			
1,100.00	1,096.19	890.86	890.85	3.90	0.95	-20.97	-3,144.89	12,535.60	12,868.50	12,863.72	4.78	2,692.185			
1,200.00	1,194.89	1,021.35	1,021.34	4.30	1.06	-21.00	-3,145.47	12,535.56	12,853.50	12,848.28	5.22	2,462.953			
1,300.00	1,293.58	1,128.78	1,128.76	4.70	1.13	-21.03	-3,145.92	12,535.37	12,838.35	12,832.73	5.62	2,283.925			
1,400.00	1,392.27	1,257.31	1,257.29	5.11	1.19	-21.06	-3,146.19	12,535.04	12,823.08	12,817.08	6.01	2,134.740			
1,500.00	1,490.96	1,391.05	1,391.03	5.52	1.21	-21.10	-3,146.13	12,534.37	12,807.52	12,801.13	6.39	2,005.538			
1,600.00	1,589.65	1,487.42	1,487.40	5.94	1.23	-21.12	-3,145.95	12,533.80	12,791.84	12,785.06	6.78	1,887.387			
1,700.00	1,688.34	1,613.90	1,613.88	6.36	1.31	-21.15	-3,146.55	12,532.70	12,776.05	12,768.85	7.20	1,774.290			
1,800.00	1,787.03	1,685.19	1,685.15	6.78	1.38	-21.17	-3,147.30	12,532.00	12,760.28	12,752.67	7.61	1,675.769			
1,900.00	1,885.73	1,746.11	1,746.07	7.20	1.44	-21.18	-3,148.09	12,531.51	12,744.76	12,736.73	8.03	1,587.514			
2,000.00	1,984.42	1,811.71	1,811.66	7.62	1.52	-21.19	-3,149.12	12,531.16	12,729.55	12,721.10	8.45	1,506.898			
2,100.00	2,083.11	1,930.89	1,930.83	8.04	1.65	-21.21	-3,150.80	12,530.51	12,714.28	12,705.37	8.90	1,428.036			
2,200.00	2,181.80	2,006.87	2,006.80	8.46	1.74	-21.23	-3,151.67	12,530.22	12,699.12	12,689.79	9.33	1,360.823			
2,300.00	2,280.49	2,143.71	2,143.62	8.89	1.91	-21.26	-3,153.39	12,529.39	12,683.74	12,673.94	9.80	1,294.390			
2,400.00	2,379.18	2,223.93	2,223.84	9.31	2.00	-21.27	-3,154.43	12,528.94	12,668.45	12,658.22	10.23	1,238.184			
2,500.00	2,477.87	2,300.00	2,299.90	9.74	2.10	-21.29	-3,155.69	12,528.49	12,653.23	12,642.56	10.66	1,186.673			
2,600.00	2,576.56	2,376.55	2,376.43	10.16	2.19	-21.30	-3,157.00	12,528.15	12,638.18	12,627.09	11.10	1,138.958			
2,700.00	2,675.26	2,581.86	2,581.73	10.59	2.44	-21.35	-3,159.12	12,527.21	12,622.99	12,611.38	11.61	1,087.433			
2,800.00	2,773.95	2,591.00	2,590.87	11.02	2.45	-21.35	-3,159.20	12,527.13	12,607.60	12,595.60	12.00	1,050.656			
2,900.00	2,872.64	2,591.00	2,590.87	11.44	2.45	-21.35	-3,159.20	12,527.13	12,592.97	12,580.58	12.39	1,016.658			
3,000.00	2,971.33	2,591.00	2,590.87	11.87	2.45	-21.35	-3,159.20	12,527.13	12,579.12	12,566.35	12.77	984.746			
3,100.00	3,070.02	2,591.00	2,590.87	12.30	2.45	-21.35	-3,159.20	12,527.13	12,566.06	12,552.90	13.16	954.746			
3,200.00	3,168.71	2,591.00	2,590.87	12.73	2.45	-21.35	-3,159.20	12,527.13	12,553.78	12,540.23	13.55	926.503			
3,300.00	3,267.40	2,591.00	2,590.87	13.16	2.45	-21.35	-3,159.20	12,527.13	12,542.28	12,528.34	13.94	899.877			
3,400.00	3,366.10	2,591.00	2,590.87	13.58	2.45	-21.35	-3,159.20	12,527.13	12,531.57	12,517.24	14.33	874.744			
3,500.00	3,464.79	2,591.00	2,590.87	14.01	2.45	-21.35	-3,159.20	12,527.13	12,521.65	12,506.93	14.71	850.990			
3,600.00	3,563.48	2,591.00	2,590.87	14.44	2.45	-21.35	-3,159.20	12,527.13	12,512.52	12,497.42	15.10	828.514			
3,700.00	3,662.17	2,591.00	2,590.87	14.87	2.45	-21.35	-3,159.20	12,527.13	12,504.18	12,488.69	15.49	807.225			
3,800.00	3,760.86	2,591.00	2,590.87	15.30	2.45	-21.35	-3,159.20	12,527.13	12,496.64	12,480.76	15.88	787.038			
3,900.00	3,859.55	2,591.00	2,590.87	15.73	2.45	-21.35	-3,159.20	12,527.13	12,489.90	12,473.63	16.27	767.877			
4,000.00	3,958.24	2,591.00	2,590.87	16.16	2.45	-21.35	-3,159.20	12,527.13	12,483.95	12,467.30	16.65	749.674			
4,100.00	4,056.94	2,591.00	2,590.87	16.59	2.45	-21.35	-3,159.20	12,527.13	12,478.80	12,461.76	17.04	732.365			
4,200.00	4,155.63	2,591.00	2,590.87	17.02	2.45	-21.35	-3,159.20	12,527.13	12,474.45	12,457.03	17.43	715.891			
4,300.00	4,254.32	2,591.00	2,590.87	17.45	2.45	-21.35	-3,159.20	12,527.13	12,470.90	12,453.09	17.81	700.201			
4,400.00	4,353.01	2,591.00	2,590.87	17.88	2.45	-21.35	-3,159.20	12,527.13	12,468.15	12,449.96	18.20	685.246			
4,500.00	4,451.70	2,591.00	2,590.87	18.30	2.45	-21.35	-3,159.20	12,527.13	12,466.21	12,447.63	18.58	670.980			
4,600.00	4,550.39	2,591.00	2,590.87	18.73	2.45	-21.35	-3,159.20	12,527.13	12,465.06	12,446.10	18.96	657.363			
4,690.80	4,640.00	2,591.00	2,590.87	19.12	2.45	-21.35	-3,159.20	12,527.13	12,464.72	12,445.41	19.31	645.529			
4,700.00	4,649.08	2,591.00	2,590.87	19.16	2.45	-21.35	-3,159.20	12,527.13	12,464.72	12,445.37	19.34	644.357			
4,800.00	4,747.77	2,591.00	2,590.87	19.59	2.45	-21.35	-3,159.20	12,527.13	12,465.18	12,445.45	19.73	631.925			

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit Com 150 - Original Hole - As Drilled													Offset Site Error:	0.00 ft
Survey Program: 100-Standard Keeper													Offset Well Error:	0.00 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Semi Major Axis Offset	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Distance Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
4,900.00	4,846.47	2,591.00	2,590.87	20.02	2.45	-21.35	-3,159.20	12,527.13	12,466.44	12,446.33	20.11	620.037		
5,000.00	4,945.16	2,591.00	2,590.87	20.45	2.45	-21.35	-3,159.20	12,527.13	12,468.50	12,448.02	20.49	608.661		
5,100.00	5,043.85	2,591.00	2,590.87	20.88	2.45	-21.35	-3,159.20	12,527.13	12,471.37	12,450.51	20.86	597.769		
5,200.00	5,142.54	2,591.00	2,590.87	21.31	2.45	-21.35	-3,159.20	12,527.13	12,475.04	12,453.80	21.24	587.336		
5,300.00	5,241.23	2,591.00	2,590.87	21.74	2.45	-21.35	-3,159.20	12,527.13	12,479.50	12,457.89	21.62	577.338		
5,400.00	5,339.92	2,591.00	2,590.87	22.17	2.45	-21.35	-3,159.20	12,527.13	12,484.77	12,462.78	21.99	567.751		
5,500.00	5,438.61	2,591.00	2,590.87	22.61	2.45	-21.35	-3,159.20	12,527.13	12,490.83	12,468.47	22.36	558.554		
5,600.00	5,537.31	2,591.00	2,590.87	23.04	2.45	-21.35	-3,159.20	12,527.13	12,497.69	12,474.96	22.73	549.728		
5,700.00	5,636.00	2,591.00	2,590.87	23.47	2.45	-21.35	-3,159.20	12,527.13	12,505.35	12,482.25	23.10	541.255		
5,800.00	5,734.69	2,591.00	2,590.87	23.90	2.45	-21.35	-3,159.20	12,527.13	12,513.80	12,490.33	23.47	533.117		
5,900.00	5,833.38	2,591.00	2,590.87	24.33	2.45	-21.35	-3,159.20	12,527.13	12,523.05	12,499.21	23.84	525.297		
6,000.00	5,932.07	2,591.00	2,590.87	24.76	2.45	-21.35	-3,159.20	12,527.13	12,533.08	12,508.88	24.21	517.782		
6,100.00	6,030.76	2,591.00	2,590.87	25.19	2.45	-21.35	-3,159.20	12,527.13	12,543.91	12,519.34	24.57	510.556		
6,200.00	6,129.45	2,591.00	2,590.87	25.62	2.45	-21.35	-3,159.20	12,527.13	12,555.52	12,530.59	24.93	503.606		
6,300.00	6,228.15	2,591.00	2,590.87	26.05	2.45	-21.35	-3,159.20	12,527.13	12,567.92	12,542.63	25.29	496.920		
6,370.81	6,298.03	2,591.00	2,590.87	26.35	2.45	-21.35	-3,159.20	12,527.13	12,577.17	12,551.62	25.55	492.338		
6,400.00	6,326.74	2,591.00	2,590.87	26.48	2.45	-13.95	-3,159.20	12,527.13	12,580.45	12,554.80	25.65	490.456		
6,450.00	6,375.33	2,591.00	2,590.87	26.73	2.45	-6.44	-3,159.20	12,527.13	12,583.22	12,557.39	25.83	487.111		
6,500.00	6,422.93	2,591.00	2,590.87	26.99	2.45	-2.09	-3,159.20	12,527.13	12,582.38	12,556.36	26.02	483.634		
6,550.00	6,469.25	2,591.00	2,590.87	27.29	2.45	0.77	-3,159.20	12,527.13	12,577.93	12,551.72	26.20	480.063		
6,600.00	6,513.99	2,591.00	2,590.87	27.61	2.45	2.84	-3,159.20	12,527.13	12,569.89	12,543.50	26.38	476.436		
6,650.00	6,556.88	2,591.00	2,590.87	27.96	2.45	4.47	-3,159.20	12,527.13	12,558.30	12,531.74	26.56	472.788		
6,700.00	6,597.66	2,591.00	2,590.87	28.34	2.45	5.85	-3,159.20	12,527.13	12,543.24	12,516.50	26.74	469.151		
6,750.00	6,636.07	2,591.00	2,590.87	28.76	2.45	7.10	-3,159.20	12,527.13	12,524.77	12,497.87	26.90	465.554		
6,800.00	6,671.88	2,591.00	2,590.87	29.21	2.45	8.29	-3,159.20	12,527.13	12,503.00	12,475.94	27.06	462.022		
6,850.00	6,704.87	2,591.00	2,590.87	29.71	2.45	9.50	-3,159.20	12,527.13	12,478.05	12,450.84	27.21	458.573		
6,900.00	6,734.84	2,591.00	2,590.87	30.25	2.45	10.77	-3,159.20	12,527.13	12,450.05	12,422.70	27.35	455.227		
6,950.00	6,761.59	2,591.00	2,590.87	30.85	2.45	12.17	-3,159.20	12,527.13	12,419.15	12,391.67	27.48	451.995		
7,000.00	6,784.97	2,591.00	2,590.87	31.50	2.45	13.75	-3,159.20	12,527.13	12,385.52	12,357.93	27.59	448.887		
7,050.00	6,804.83	2,591.00	2,590.87	32.20	2.45	15.60	-3,159.20	12,527.13	12,349.36	12,321.66	27.69	445.910		
7,100.00	6,821.05	2,591.00	2,590.87	32.96	2.45	17.82	-3,159.20	12,527.13	12,310.85	12,283.06	27.79	443.067		
7,150.00	6,833.53	2,591.00	2,590.87	33.77	2.45	20.55	-3,159.20	12,527.13	12,270.22	12,242.35	27.86	440.357		
7,200.00	6,842.18	2,591.00	2,590.87	34.62	2.45	24.01	-3,159.20	12,527.13	12,227.70	12,199.76	27.93	437.777		
7,250.00	6,846.97	2,591.00	2,590.87	35.52	2.45	28.50	-3,159.20	12,527.13	12,183.52	12,155.54	27.99	435.323		
7,286.15	6,848.00	2,591.00	2,590.87	36.18	2.45	32.65	-3,159.20	12,527.13	12,150.71	12,122.68	28.02	433.611		
7,300.00	6,848.00	2,591.00	2,590.87	36.44	2.45	32.65	-3,159.20	12,527.13	12,138.01	12,109.97	28.03	432.962		
7,400.00	6,848.03	2,591.00	2,590.87	38.40	2.45	32.65	-3,159.20	12,527.13	12,046.39	12,018.26	28.13	428.295		
7,500.00	6,848.05	2,591.00	2,590.87	40.49	2.45	32.65	-3,159.20	12,527.13	11,954.91	11,926.67	28.24	423.310		
7,600.00	6,848.08	2,591.00	2,590.87	42.70	2.45	32.65	-3,159.20	12,527.13	11,863.56	11,835.18	28.38	418.014		
7,700.00	6,848.10	2,591.00	2,590.87	45.01	2.45	32.65	-3,159.20	12,527.13	11,772.36	11,743.81	28.54	412.415		
7,800.00	6,848.12	2,591.00	2,590.87	47.40	2.45	32.65	-3,159.20	12,527.13	11,681.30	11,652.56	28.73	406.524		
7,900.00	6,848.15	2,591.00	2,590.87	49.86	2.45	32.65	-3,159.20	12,527.13	11,590.39	11,561.44	28.95	400.353		
8,000.00	6,848.17	2,591.00	2,590.87	52.39	2.45	32.65	-3,159.20	12,527.13	11,499.63	11,470.43	29.19	393.919		
8,100.00	6,848.20	2,591.00	2,590.87	54.96	2.45	32.65	-3,159.20	12,527.13	11,409.02	11,379.56	29.46	387.238		
8,200.00	6,848.22	2,591.00	2,590.87	57.58	2.45	32.65	-3,159.20	12,527.13	11,318.57	11,288.81	29.76	380.331		
8,300.00	6,848.25	2,591.00	2,590.87	60.24	2.45	32.65	-3,159.20	12,527.13	11,228.28	11,198.20	30.09	373.216		
8,400.00	6,848.27	2,591.00	2,590.87	62.94	2.45	32.65	-3,159.20	12,527.13	11,138.16	11,107.72	30.44	365.917		
8,500.00	6,848.29	2,591.00	2,590.87	65.66	2.45	32.65	-3,159.20	12,527.13	11,048.21	11,017.39	30.82	358.456		
8,600.00	6,848.32	2,591.00	2,590.87	68.42	2.45	32.65	-3,159.20	12,527.13	10,958.43	10,927.20	31.23	350.857		
8,700.00	6,848.34	2,591.00	2,590.87	71.19	2.45	32.65	-3,159.20	12,527.13	10,868.83	10,837.16	31.67	343.144		
8,800.00	6,848.37	2,591.00	2,590.87	73.99	2.45	32.65	-3,159.20	12,527.13	10,779.42	10,747.27	32.14	335.340		
8,900.00	6,848.39	2,591.00	2,590.87	76.80	2.45	32.65	-3,159.20	12,527.13	10,690.19	10,657.55	32.64	327.468		

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit Com 150 - Original Hole - As Drilled													Offset Site Error:	0.00 ft
Survey Program: 100-Standard Keeper													Offset Well Error:	0.00 ft
Reference	Offset	Semi Major Axis		Distance		Rule Assigned:		Warning						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
9,000.00	6,848.42	2,591.00	2,590.87	79.63	2.45	32.65	-3,159.20	12,527.13	10,601.15	10,567.98	33.18	319.552		
9,100.00	6,848.44	2,591.00	2,590.87	82.47	2.45	32.65	-3,159.20	12,527.13	10,512.32	10,478.58	33.74	311.614		
9,200.00	6,848.46	2,591.00	2,590.87	85.33	2.45	32.65	-3,159.20	12,527.13	10,423.68	10,389.35	34.33	303.675		
9,300.00	6,848.49	2,591.00	2,590.87	88.20	2.45	32.65	-3,159.20	12,527.13	10,335.25	10,300.31	34.95	295.754		
9,400.00	6,848.51	2,591.00	2,590.87	91.08	2.45	32.65	-3,159.20	12,527.13	10,247.04	10,211.44	35.60	287.872		
9,500.00	6,848.54	2,591.00	2,590.87	93.97	2.45	32.65	-3,159.20	12,527.13	10,159.04	10,122.76	36.28	280.044		
9,600.00	6,848.56	2,591.00	2,590.87	96.87	2.45	32.65	-3,159.20	12,527.13	10,071.26	10,034.28	36.99	272.288		
9,700.00	6,848.58	2,591.00	2,590.87	99.77	2.45	32.65	-3,159.20	12,527.13	9,983.72	9,945.99	37.73	264.617		
9,800.00	6,848.61	2,591.00	2,590.87	102.69	2.45	32.65	-3,159.20	12,527.13	9,896.41	9,857.91	38.50	257.045		
9,900.00	6,848.63	2,591.00	2,590.87	105.61	2.45	32.65	-3,159.20	12,527.13	9,809.35	9,770.04	39.30	249.584		
10,000.00	6,848.66	2,591.00	2,590.87	108.53	2.45	32.65	-3,159.20	12,527.13	9,722.53	9,682.39	40.14	242.243		
10,100.00	6,848.68	2,591.00	2,590.87	111.46	2.45	32.65	-3,159.20	12,527.13	9,635.97	9,594.97	41.00	235.031		
10,200.00	6,848.71	2,591.00	2,590.87	114.40	2.45	32.65	-3,159.20	12,527.13	9,549.67	9,507.78	41.89	227.957		
10,300.00	6,848.73	2,591.00	2,590.87	117.34	2.45	32.65	-3,159.20	12,527.13	9,463.64	9,420.83	42.82	221.026		
10,400.00	6,848.75	2,591.00	2,590.87	120.29	2.45	32.65	-3,159.20	12,527.13	9,377.89	9,334.12	43.77	214.244		
10,500.00	6,848.78	2,591.00	2,590.87	123.24	2.45	32.65	-3,159.20	12,527.13	9,292.42	9,247.67	44.76	207.614		
10,600.00	6,848.80	2,591.00	2,590.87	126.20	2.45	32.65	-3,159.20	12,527.13	9,207.25	9,161.48	45.78	201.141		
10,700.00	6,848.83	2,591.00	2,590.87	129.16	2.45	32.65	-3,159.20	12,527.13	9,122.38	9,075.55	46.82	194.826		
10,800.00	6,848.85	2,591.00	2,590.87	132.12	2.45	32.65	-3,159.20	12,527.13	9,037.81	8,989.91	47.90	188.671		
10,900.00	6,848.88	2,591.00	2,590.87	135.08	2.45	32.65	-3,159.20	12,527.13	8,953.57	8,904.56	49.01	182.676		
11,000.00	6,848.90	2,591.00	2,590.87	138.05	2.45	32.65	-3,159.20	12,527.13	8,869.65	8,819.50	50.16	176.843		
11,100.00	6,848.92	2,591.00	2,590.87	141.02	2.45	32.65	-3,159.20	12,527.13	8,786.07	8,734.74	51.33	171.170		
11,200.00	6,848.95	2,591.00	2,590.87	144.00	2.45	32.65	-3,159.20	12,527.13	8,702.83	8,650.30	52.54	165.656		
11,300.00	6,848.97	2,591.00	2,590.87	146.97	2.45	32.65	-3,159.20	12,527.13	8,619.96	8,566.18	53.77	160.300		
11,400.00	6,849.00	2,591.00	2,590.87	149.95	2.45	32.65	-3,159.20	12,527.13	8,537.44	8,482.40	55.04	155.101		
11,500.00	6,849.02	2,591.00	2,590.87	152.93	2.45	32.65	-3,159.20	12,527.13	8,455.31	8,398.96	56.35	150.056		
11,600.00	6,849.04	2,591.00	2,590.87	155.91	2.45	32.65	-3,159.20	12,527.13	8,373.56	8,315.88	57.68	145.163		
11,700.00	6,849.07	2,591.00	2,590.87	158.90	2.45	32.65	-3,159.20	12,527.13	8,292.22	8,233.16	59.05	140.419		
11,800.00	6,849.09	2,591.00	2,590.87	161.88	2.45	32.65	-3,159.20	12,527.13	8,211.28	8,150.83	60.46	135.822		
11,900.00	6,849.12	2,591.00	2,590.87	164.87	2.45	32.65	-3,159.20	12,527.13	8,130.77	8,068.88	61.89	131.369		
12,000.00	6,849.14	2,591.00	2,590.87	167.86	2.45	32.65	-3,159.20	12,527.13	8,050.70	7,987.34	63.36	127.056		
12,100.00	6,849.17	2,591.00	2,590.87	170.85	2.45	32.65	-3,159.20	12,527.13	7,971.08	7,906.21	64.87	122.880		
12,200.00	6,849.19	2,591.00	2,590.87	173.84	2.45	32.65	-3,159.20	12,527.13	7,891.92	7,825.51	66.41	118.839		
12,300.00	6,849.21	2,591.00	2,590.87	176.84	2.45	32.65	-3,159.20	12,527.13	7,813.24	7,745.26	67.98	114.928		
12,400.00	6,849.24	2,591.00	2,590.87	179.83	2.45	32.65	-3,159.20	12,527.13	7,735.05	7,665.46	69.59	111.145		
12,500.00	6,849.26	2,591.00	2,590.87	182.83	2.45	32.65	-3,159.20	12,527.13	7,657.37	7,586.13	71.24	107.487		
12,600.00	6,849.29	2,591.00	2,590.87	185.82	2.45	32.65	-3,159.20	12,527.13	7,580.22	7,507.29	72.92	103.949		
12,700.00	6,849.31	2,591.00	2,590.87	188.82	2.45	32.65	-3,159.20	12,527.13	7,503.60	7,428.96	74.64	100.529		
12,800.00	6,849.34	2,591.00	2,590.87	191.82	2.45	32.65	-3,159.20	12,527.13	7,427.54	7,351.14	76.40	97.224		
12,900.00	6,849.36	2,591.00	2,590.87	194.82	2.45	32.65	-3,159.20	12,527.13	7,352.05	7,273.86	78.19	94.031		
13,000.00	6,849.38	2,591.00	2,590.87	197.82	2.45	32.65	-3,159.20	12,527.13	7,277.15	7,197.13	80.02	90.945		
13,100.00	6,849.41	2,591.00	2,590.87	200.83	2.45	32.65	-3,159.20	12,527.13	7,202.86	7,120.98	81.88	87.965		
13,200.00	6,849.43	2,591.00	2,590.87	203.83	2.45	32.65	-3,159.20	12,527.13	7,129.20	7,045.42	83.79	85.086		
13,300.00	6,849.46	2,591.00	2,590.87	206.83	2.45	32.65	-3,159.20	12,527.13	7,056.19	6,970.46	85.73	82.307		
13,400.00	6,849.48	2,591.00	2,590.87	209.84	2.45	32.65	-3,159.20	12,527.13	6,983.85	6,896.14	87.71	79.624		
13,500.00	6,849.50	2,591.00	2,590.87	212.84	2.45	32.65	-3,159.20	12,527.13	6,912.20	6,822.47	89.73	77.034		
13,600.00	6,849.53	2,591.00	2,590.87	215.85	2.45	32.65	-3,159.20	12,527.13	6,841.26	6,749.47	91.79	74.535		
13,700.00	6,849.55	2,591.00	2,590.87	218.86	2.45	32.65	-3,159.20	12,527.13	6,771.05	6,677.17	93.88	72.123		
13,800.00	6,849.58	2,591.00	2,590.87	221.87	2.45	32.65	-3,159.20	12,527.13	6,701.60	6,605.58	96.02	69.797		
13,900.00	6,849.60	2,591.00	2,590.87	224.87	2.45	32.65	-3,159.20	12,527.13	6,632.93	6,534.74	98.19	67.554		
14,000.00	6,849.63	2,591.00	2,590.87	227.88	2.45	32.65	-3,159.20	12,527.13	6,565.06	6,464.66	100.40	65.391		
14,100.00	6,849.65	2,591.00	2,590.87	230.89	2.45	32.65	-3,159.20	12,527.13	6,498.03	6,395.38	102.65	63.305		

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit Com 150 - Original Hole - As Drilled												Offset Site Error:	0.00 ft
Survey Program: 100-Standard Keeper												Offset Well Error:	0.00 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
14,200.00	6,849.67	2,591.00	2,590.87	233.90	2.45	32.65	-3,159.20	12,527.13	6,431.85	6,326.91	104.93	61.295	
14,300.00	6,849.70	2,591.00	2,590.87	236.92	2.45	32.65	-3,159.20	12,527.13	6,366.55	6,259.29	107.26	59.359	
14,399.79	6,849.72	2,591.00	2,590.87	239.92	2.45	32.65	-3,159.20	12,527.13	6,302.30	6,192.68	109.61	57.497	
14,400.00	6,849.72	2,591.00	2,590.87	239.93	2.45	32.65	-3,159.20	12,527.13	6,302.16	6,192.55	109.62	57.493	
14,499.38	6,849.75	2,591.00	2,590.87	242.92	2.45	32.65	-3,159.20	12,527.13	6,239.11	6,127.11	112.00	55.707	
14,500.00	6,849.75	2,591.00	2,590.87	242.94	2.45	32.65	-3,159.20	12,527.13	6,238.72	6,126.70	112.01	55.696	
14,598.97	6,849.77	2,591.00	2,590.87	245.92	2.45	32.65	-3,159.20	12,527.13	6,176.88	6,062.46	114.42	53.984	
14,600.00	6,849.77	2,591.00	2,590.87	245.95	2.45	32.65	-3,159.20	12,527.13	6,176.24	6,061.79	114.45	53.966	
14,698.55	6,849.80	2,591.00	2,590.87	248.92	2.45	32.65	-3,159.20	12,527.13	6,115.64	5,998.76	116.88	52.325	
14,700.00	6,849.80	2,591.00	2,590.87	248.96	2.45	32.65	-3,159.20	12,527.13	6,114.75	5,997.84	116.91	52.301	
14,798.12	6,849.82	2,591.00	2,590.87	251.92	2.45	32.65	-3,159.20	12,527.13	6,055.42	5,936.05	119.37	50.728	
14,800.00	6,849.82	2,591.00	2,590.87	251.98	2.45	32.65	-3,159.20	12,527.13	6,054.30	5,934.88	119.42	50.699	
14,897.69	6,849.84	2,591.00	2,590.87	254.92	2.45	32.65	-3,159.20	12,527.13	5,996.26	5,874.36	121.89	49.192	
14,900.00	6,849.84	2,591.00	2,590.87	254.99	2.45	32.65	-3,159.20	12,527.13	5,994.90	5,872.95	121.95	49.157	
14,997.26	6,849.87	2,591.00	2,590.87	257.92	2.45	32.65	-3,159.20	12,527.13	5,938.18	5,813.73	124.45	47.715	
15,000.00	6,849.87	2,591.00	2,590.87	258.01	2.45	32.65	-3,159.20	12,527.13	5,936.59	5,812.07	124.52	47.676	
15,096.82	6,849.89	2,591.00	2,590.87	260.93	2.45	32.65	-3,159.20	12,527.13	5,881.21	5,754.17	127.04	46.295	
15,100.00	6,849.89	2,591.00	2,590.87	261.02	2.45	32.65	-3,159.20	12,527.13	5,879.41	5,752.29	127.12	46.251	
15,196.38	6,849.92	2,591.00	2,590.87	263.93	2.45	32.65	-3,159.20	12,527.13	5,825.39	5,695.73	129.65	44.931	
15,200.00	6,849.92	2,591.00	2,590.87	264.04	2.45	32.65	-3,159.20	12,527.13	5,823.38	5,693.63	129.75	44.882	
15,295.94	6,849.94	2,591.00	2,590.87	266.93	2.45	32.65	-3,159.20	12,527.13	5,770.75	5,638.45	132.30	43.620	
15,300.00	6,849.94	2,591.00	2,590.87	267.05	2.45	32.65	-3,159.20	12,527.13	5,768.54	5,636.14	132.40	43.568	
15,395.49	6,849.96	2,591.00	2,590.87	269.93	2.45	32.65	-3,159.20	12,527.13	5,717.32	5,582.36	134.96	42.362	
15,400.00	6,849.97	2,591.00	2,590.87	270.07	2.45	32.65	-3,159.20	12,527.13	5,714.93	5,579.84	135.09	42.306	
15,495.03	6,849.99	2,591.00	2,590.87	272.93	2.45	32.65	-3,159.20	12,527.13	5,665.14	5,527.49	137.66	41.154	
15,500.00	6,849.99	2,591.00	2,590.87	273.08	2.45	32.65	-3,159.20	12,527.13	5,662.57	5,524.78	137.79	41.095	
15,594.57	6,850.01	2,591.00	2,590.87	275.94	2.45	32.65	-3,159.20	12,527.13	5,614.25	5,473.88	140.37	39.996	
15,600.00	6,850.01	2,591.00	2,590.87	276.10	2.45	32.65	-3,159.20	12,527.13	5,611.51	5,470.99	140.52	39.934	
15,694.10	6,850.04	2,591.00	2,590.87	278.94	2.45	32.65	-3,159.20	12,527.13	5,564.67	5,421.56	143.11	38.885	
15,700.00	6,850.04	2,591.00	2,590.87	279.12	2.45	32.65	-3,159.20	12,527.13	5,561.77	5,418.50	143.27	38.821	
15,793.62	6,850.06	2,591.00	2,590.87	281.94	2.45	32.65	-3,159.20	12,527.13	5,516.45	5,370.59	145.86	37.821	
15,800.00	6,850.06	2,591.00	2,590.87	282.14	2.45	32.65	-3,159.20	12,527.13	5,513.40	5,367.37	146.03	37.754	
15,893.14	6,850.08	2,591.00	2,590.87	284.95	2.45	32.65	-3,159.20	12,527.13	5,469.61	5,320.99	148.62	36.802	
15,900.00	6,850.09	2,591.00	2,590.87	285.15	2.45	32.65	-3,159.20	12,527.13	5,466.44	5,317.62	148.81	36.733	
15,992.65	6,850.11	2,591.00	2,590.87	287.95	2.45	32.65	-3,159.20	12,527.13	5,424.20	5,272.80	151.40	35.827	
16,000.00	6,850.11	2,591.00	2,590.87	288.17	2.45	32.65	-3,159.20	12,527.13	5,420.91	5,269.30	151.61	35.757	
16,092.16	6,850.13	2,591.00	2,590.87	290.95	2.45	32.65	-3,159.20	12,527.13	5,380.25	5,226.07	154.19	34.894	
16,100.00	6,850.13	2,591.00	2,590.87	291.19	2.45	32.65	-3,159.20	12,527.13	5,376.85	5,222.45	154.41	34.823	
16,191.66	6,850.16	2,591.00	2,590.87	293.96	2.45	32.65	-3,159.20	12,527.13	5,337.80	5,180.82	156.98	34.003	
16,200.00	6,850.16	2,591.00	2,590.87	294.21	2.45	32.65	-3,159.20	12,527.13	5,334.31	5,177.10	157.21	33.931	
16,291.15	6,850.18	2,591.00	2,590.87	296.96	2.45	32.65	-3,159.20	12,527.13	5,296.88	5,137.11	159.77	33.153	
16,300.00	6,850.18	2,591.00	2,590.87	297.23	2.45	32.65	-3,159.20	12,527.13	5,293.31	5,133.29	160.02	33.079	
16,390.64	6,850.21	2,591.00	2,590.87	299.96	2.45	32.65	-3,159.20	12,527.13	5,257.52	5,094.96	162.56	32.341	
16,400.00	6,850.21	2,591.00	2,590.87	300.25	2.45	32.65	-3,159.20	12,527.13	5,253.90	5,091.08	162.83	32.267	
16,490.12	6,850.23	2,591.00	2,590.87	302.97	2.45	32.65	-3,159.20	12,527.13	5,219.77	5,054.42	165.35	31.568	
16,500.00	6,850.23	2,591.00	2,590.87	303.27	2.45	32.65	-3,159.20	12,527.13	5,216.11	5,050.48	165.63	31.493	
16,589.59	6,850.25	2,591.00	2,590.87	305.97	2.45	32.65	-3,159.20	12,527.13	5,183.66	5,015.53	168.13	30.831	
16,600.00	6,850.26	2,591.00	2,590.87	306.28	2.45	32.65	-3,159.20	12,527.13	5,179.97	5,011.55	168.42	30.756	
16,689.05	6,850.28	2,591.00	2,590.87	308.97	2.45	32.65	-3,159.20	12,527.13	5,149.21	4,978.32	170.89	30.131	
16,700.00	6,850.28	2,591.00	2,590.87	309.30	2.45	32.65	-3,159.20	12,527.13	5,145.52	4,974.33	171.20	30.056	
16,788.51	6,850.30	2,591.00	2,590.87	311.98	2.45	32.65	-3,159.20	12,527.13	5,116.47	4,942.83	173.64	29.466	
16,800.00	6,850.30	2,591.00	2,590.87	312.32	2.45	32.65	-3,159.20	12,527.13	5,112.80	4,938.84	173.96	29.391	

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



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit Com 150 - Original Hole - As Drilled													Offset Site Error:	0.00 ft
Survey Program: 100-Standard Keeper													Offset Well Error:	0.00 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
16,887.96	6,850.33	2,591.00	2,590.87	314.98	2.45	32.65	-3,159.20	12,527.13	5,085.47	4,909.10	176.37	28.834		
16,900.00	6,850.33	2,591.00	2,590.87	315.35	2.45	32.65	-3,159.20	12,527.13	5,081.83	4,905.14	176.70	28.760		
16,987.40	6,850.35	2,591.00	2,590.87	317.99	2.45	32.65	-3,159.20	12,527.13	5,056.23	4,877.17	179.07	28.236		
17,000.00	6,850.35	2,591.00	2,590.87	318.37	2.45	32.65	-3,159.20	12,527.13	5,052.66	4,873.25	179.41	28.163		
17,086.83	6,850.37	2,591.00	2,590.87	320.99	2.45	32.65	-3,159.20	12,527.13	5,028.80	4,847.06	181.74	27.670		
17,100.00	6,850.38	2,591.00	2,590.87	321.39	2.45	32.65	-3,159.20	12,527.13	5,025.30	4,843.21	182.09	27.598		
17,186.26	6,850.40	2,591.00	2,590.87	323.99	2.45	32.65	-3,159.20	12,527.13	5,003.19	4,818.82	184.37	27.136		
17,200.00	6,850.40	2,591.00	2,590.87	324.41	2.45	32.65	-3,159.20	12,527.13	4,999.80	4,815.06	184.74	27.065		
17,285.68	6,850.42	2,591.00	2,590.87	327.00	2.45	32.65	-3,159.20	12,527.13	4,979.44	4,792.47	186.97	26.632		
17,300.00	6,850.43	2,591.00	2,590.87	327.43	2.45	32.65	-3,159.20	12,527.13	4,976.17	4,788.83	187.34	26.562		
17,385.10	6,850.45	2,591.00	2,590.87	330.00	2.45	32.65	-3,159.20	12,527.13	4,957.57	4,768.04	189.52	26.158		
17,400.00	6,850.45	2,591.00	2,590.87	330.45	2.45	32.65	-3,159.20	12,527.13	4,954.45	4,764.55	189.90	26.090		
17,484.51	6,850.47	2,591.00	2,590.87	333.00	2.45	32.65	-3,159.20	12,527.13	4,937.60	4,745.58	192.03	25.713		
17,500.00	6,850.47	2,591.00	2,590.87	333.47	2.45	32.65	-3,159.20	12,527.13	4,934.66	4,742.25	192.41	25.646		
17,583.91	6,850.49	2,591.00	2,590.87	336.01	2.45	32.65	-3,159.20	12,527.13	4,919.57	4,725.09	194.48	25.296		
17,600.00	6,850.50	2,591.00	2,590.87	336.49	2.45	32.65	-3,159.20	12,527.13	4,916.83	4,721.96	194.87	25.231		
17,683.31	6,850.52	2,591.00	2,590.87	339.01	2.45	32.65	-3,159.20	12,527.13	4,903.48	4,706.61	196.87	24.907		
17,700.00	6,850.52	2,591.00	2,590.87	339.52	2.45	32.65	-3,159.20	12,527.13	4,900.97	4,703.70	197.27	24.844		
17,782.70	6,850.54	2,591.00	2,590.87	342.02	2.45	32.65	-3,159.20	12,527.13	4,889.36	4,690.16	199.21	24.544		
17,800.00	6,850.55	2,591.00	2,590.87	342.54	2.45	32.65	-3,159.20	12,527.13	4,887.11	4,687.50	199.60	24.484		
17,882.09	6,850.57	2,591.00	2,590.87	345.02	2.45	32.65	-3,159.20	12,527.13	4,877.23	4,675.76	201.47	24.208		
17,900.00	6,850.57	2,591.00	2,590.87	345.56	2.45	32.65	-3,159.20	12,527.13	4,875.26	4,673.38	201.87	24.150		
17,981.48	6,850.59	2,591.00	2,590.87	348.02	2.45	32.65	-3,159.20	12,527.13	4,867.10	4,663.43	203.67	23.897		
18,000.00	6,850.59	2,591.00	2,590.87	348.58	2.45	32.65	-3,159.20	12,527.13	4,865.44	4,661.36	204.07	23.842		
18,080.86	6,850.61	2,591.00	2,590.87	351.03	2.45	32.65	-3,159.20	12,527.13	4,858.98	4,653.19	205.80	23.611		
18,100.00	6,850.62	2,591.00	2,590.87	351.61	2.45	32.65	-3,159.20	12,527.13	4,857.65	4,651.45	206.20	23.558		
18,180.25	6,850.64	2,591.00	2,590.87	354.03	2.45	32.65	-3,159.20	12,527.13	4,852.89	4,645.04	207.85	23.348		
18,200.00	6,850.64	2,591.00	2,590.87	354.63	2.45	32.65	-3,159.20	12,527.13	4,851.92	4,643.67	208.24	23.299		
18,279.64	6,850.66	2,591.00	2,590.87	357.04	2.45	32.65	-3,159.20	12,527.13	4,848.82	4,639.00	209.82	23.110		
18,300.00	6,850.67	2,591.00	2,590.87	357.65	2.45	32.65	-3,159.20	12,527.13	4,848.24	4,638.03	210.21	23.064		
18,379.03	6,850.69	2,591.00	2,590.87	360.04	2.45	32.65	-3,159.20	12,527.13	4,846.79	4,635.08	211.70	22.894		
18,400.00	6,850.69	2,591.00	2,590.87	360.67	2.45	32.65	-3,159.20	12,527.13	4,846.62	4,634.53	212.09	22.852		
18,428.44	6,850.70	2,591.00	2,590.87	361.53	2.45	32.65	-3,159.20	12,527.13	4,846.53	4,633.92	212.61	22.795 CC		
18,500.00	6,850.72	2,591.00	2,590.87	363.70	2.45	32.65	-3,159.20	12,527.13	4,847.06	4,633.18	213.89	22.662		
18,522.27	6,850.72	2,591.00	2,590.87	364.37	2.45	32.65	-3,159.20	12,527.13	4,847.44	4,633.17	214.27	22.623 ES		
18,600.00	6,850.74	2,591.00	2,590.87	366.72	2.45	32.65	-3,159.20	12,527.13	4,849.57	4,633.98	215.59	22.494		
18,621.69	6,850.75	2,591.00	2,590.87	367.38	2.45	32.65	-3,159.20	12,527.13	4,850.39	4,634.44	215.95	22.461		
18,700.00	6,850.76	2,591.00	2,590.87	369.75	2.45	32.65	-3,159.20	12,527.13	4,854.14	4,636.93	217.21	22.348		
18,721.12	6,850.77	2,591.00	2,590.87	370.38	2.45	32.65	-3,159.20	12,527.13	4,855.36	4,637.83	217.54	22.320		
18,800.00	6,850.79	2,591.00	2,590.87	372.77	2.45	32.65	-3,159.20	12,527.13	4,860.76	4,642.03	218.73	22.223		
18,820.56	6,850.79	2,591.00	2,590.87	373.39	2.45	32.65	-3,159.20	12,527.13	4,862.37	4,643.34	219.03	22.200		
18,900.00	6,850.81	2,591.00	2,590.87	375.79	2.45	32.65	-3,159.20	12,527.13	4,869.42	4,649.26	220.16	22.118		
18,920.03	6,850.82	2,591.00	2,590.87	376.40	2.45	32.65	-3,159.20	12,527.13	4,871.40	4,650.97	220.43	22.099		
19,000.00	6,850.84	2,591.00	2,590.87	378.82	2.45	32.65	-3,159.20	12,527.13	4,880.12	4,658.63	221.49	22.033		
19,019.52	6,850.84	2,591.00	2,590.87	379.41	2.45	32.65	-3,159.20	12,527.13	4,882.44	4,660.70	221.74	22.019		
19,100.00	6,850.86	2,591.00	2,590.87	381.84	2.45	32.65	-3,159.20	12,527.13	4,892.84	4,670.11	222.73	21.967		
19,119.02	6,850.87	2,591.00	2,590.87	382.42	2.45	32.65	-3,159.20	12,527.13	4,895.49	4,672.53	222.96	21.957		
19,200.00	6,850.89	2,591.00	2,590.87	384.87	2.45	32.65	-3,159.20	12,527.13	4,907.56	4,683.69	223.88	21.921		
19,300.00	6,850.91	2,591.00	2,590.87	387.89	2.45	32.65	-3,159.20	12,527.13	4,924.28	4,699.35	224.93	21.893		
19,400.00	6,850.93	2,591.00	2,590.87	390.91	2.45	32.65	-3,159.20	12,527.13	4,942.96	4,717.08	225.88	21.883 SF		
19,500.00	6,850.96	2,591.00	2,590.87	393.94	2.45	32.65	-3,159.20	12,527.13	4,963.58	4,736.84	226.74	21.891		
19,600.00	6,850.98	2,591.00	2,590.87	396.96	2.45	32.65	-3,159.20	12,527.13	4,986.12	4,758.61	227.51	21.916		

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



Lonestar Consulting, LLC Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design: Allison Unit 611H - Allison Unit Com 150 - Original Hole - As Drilled													Offset Site Error:	0.00 ft
Survey Program: 100-Standard Keeper													Offset Well Error:	0.00 ft
Reference	Offset	Semi Major Axis		Distance		Rule Assigned:		Warning						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
19,673.90	6,851.00	2,591.00	2,590.87	399.20	2.45	32.65	-3,159.20	12,527.13	5,003.99	4,775.97	228.02	21.945		
19,700.00	6,851.01	2,591.00	2,590.87	399.99	2.45	32.65	-3,159.20	12,527.13	5,010.55	4,782.36	228.19	21.958		
19,773.90	6,851.02	2,591.00	2,590.87	402.22	2.45	32.65	-3,159.20	12,527.13	5,029.81	4,801.18	228.64	21.999		



Lonestar Consulting, LLC

Anticollision Report



Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Reference Depths are relative to GL 6354' & RKB 17' @ 6371.00ft

Offset Depths are relative to Offset Datum

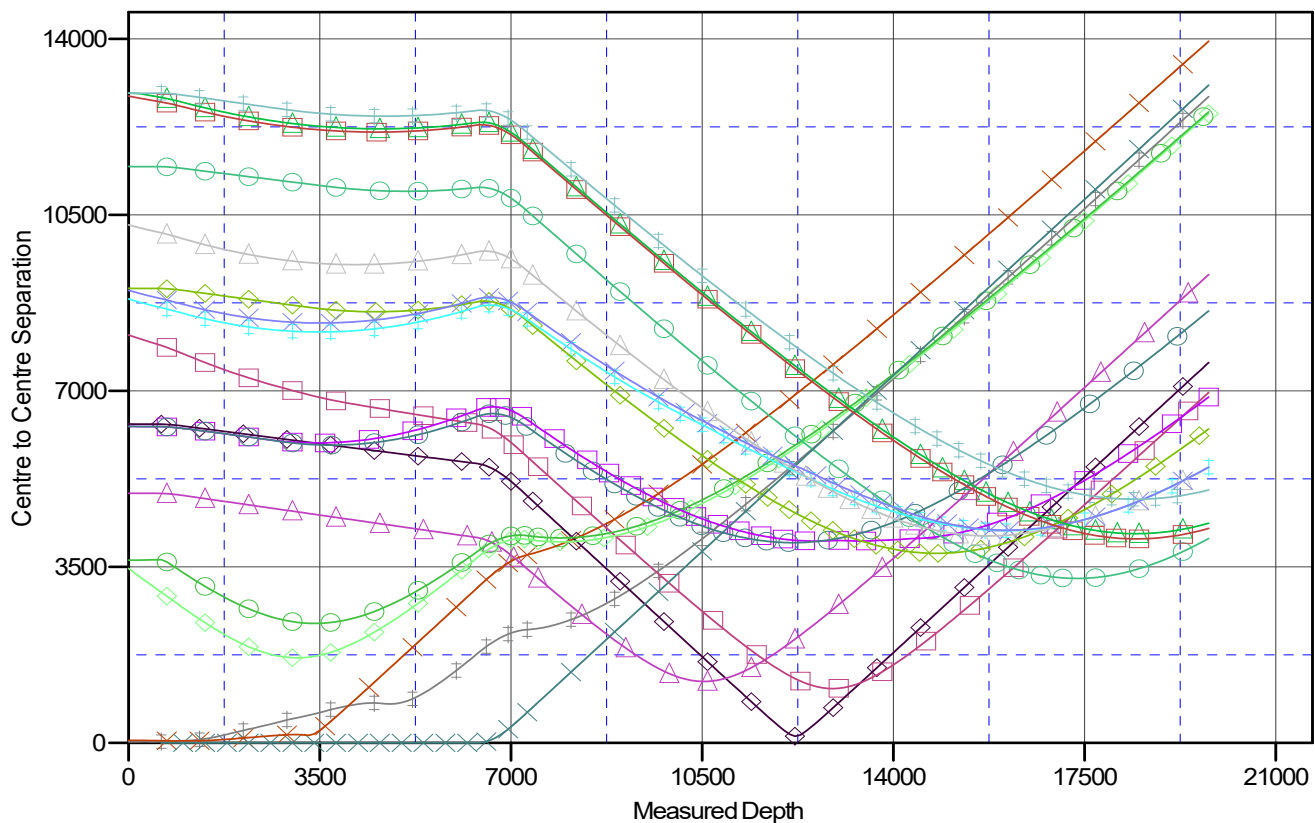
Central Meridian is -107.8333334

Coordinates are relative to: Allison Unit 611H

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

Grid Convergence at Surface is: 0.19°

Ladder Plot



LEGEND

Allison 13NOH,AsDrilled V0	Allison Unit125S,OH O HVO	Allison UnitCom138H,Lateral,LateralV0
Allison 13POH,AsDrilled V0	Allison Unit133,Lateral,Lateral#1,AsDrilled V0	Allison UnitCom138H,Plan#2,V0
Allison Unit061,OH OH V0	Allison Unit133,Lateral,OriginalHole,AsDrilled V0	Allison UnitCom138H,ST #2,ST #2 V0
Allison Unit061M,OH OH V0	Allison Unit134S,OH OH V0	Allison UnitCom150,L,ateral#1,AsDrilled V0
Allison Unit061N,OH OH V0	Allison Unit47B,Origin at Hole,AsDrilled V0	Allison UnitCom150,L,ateral#1,ST #1,AsDrilled V0
Allison Unit125S,Lateral,LateralV0	Allison Unit611H,Plot,Plan #2 V0	Allison UnitCom150,O,originalHole,AsDrilled V0

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



Lonestar Consulting, LLC

Anticollision Report

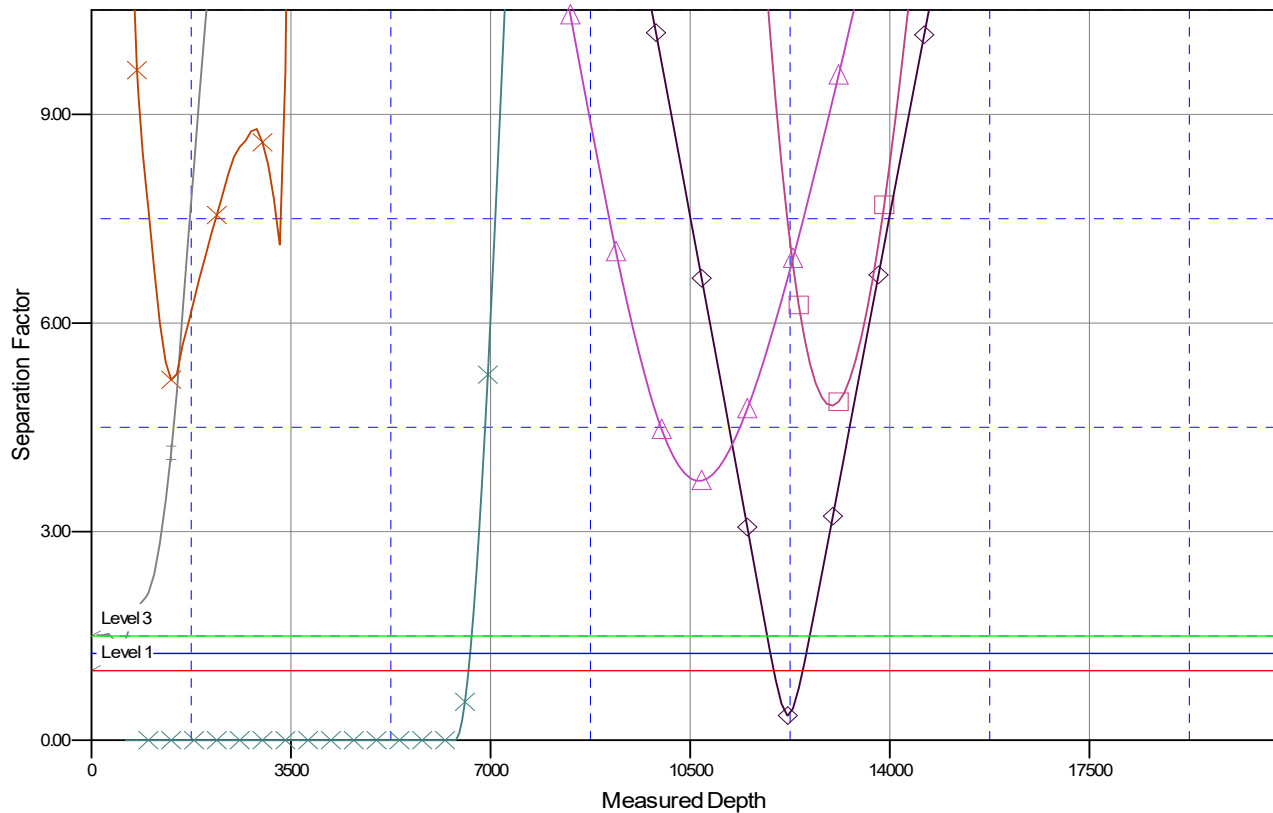


Company:	Hilcorp Energy Corp.	Local Co-ordinate Reference:	Well Allison Unit 611H
Project:	San Juan, NM NAD27	TVD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Reference Site:	Allison Unit 611H	MD Reference:	GL 6354' & RKB 17' @ 6371.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Allison Unit 611H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Reference Depths are relative to GL 6354' & RKB 17' @ 6371.00ft
 Offset Depths are relative to Offset Datum
 Central Meridian is -107.8333334

Coordinates are relative to: Allison Unit 611H
 Coordinate System is US State Plane 1927 (Exact solution), New Mexico West 30
 Grid Convergence at Surface is: 0.19°

Separation Factor Plot



LEGEND

Allison 13NOH/AsDrilled V0	Allison Unit125S,OH/O HVO	Allison UnitCom138H, Lateral/Lateral V0
Allison 13POH/AsDrilled V0	Allison Unit133, Lateral/Lateral#1, AsDrilled V0	Allison UnitCom138H, Plot#2 V0
Allison Unit061,OH/O HVO	Allison Unit133, Lateral/OriginalHole, AsDrilled V0	Allison UnitCom138H, ST #2, ST #2 V0
Allison Unit061M,OH/O HVO	Allison Unit134S,OH/O HVO	Allison UnitCom150, Lateral#1, AsDrilled V0
Allison Unit061N,OH/O HVO	Allison Unit47B, Origin all Hole, AsDrilled V0	Allison UnitCom150, Lateral#1 ST #1, AsDrilled V0
Allison Unit125S, Lateral/Lateral V0	Allison Unit611H, Plot, Plan #2 V0	Allison UnitCom150, OriginalHole, AsDrilled V0

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:** 9/14/2023

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 MMCF/D	Anticipated Produced Water BBL/D
Allison Unit 611H		F, Sec 12, T32N, R07W LOT 3	154' FNL & 1625' FWL	0	15	100

IV. Central Delivery Point Name: Milagro/Ignacio Gas 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 611H</u>		<u>2024</u>				<u>2024</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: Operations Regulatory Tech Sr.
E-mail Address: mwalker@hilcorp.com
Date: 9/14/2023
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.