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Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
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District III
1000 Rio Brazos Road, Aztec, NM 87410
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District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102
Revised August 1, 2011
Submit one copy to appropriate
District Office
☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

PRE-PERF PLAT

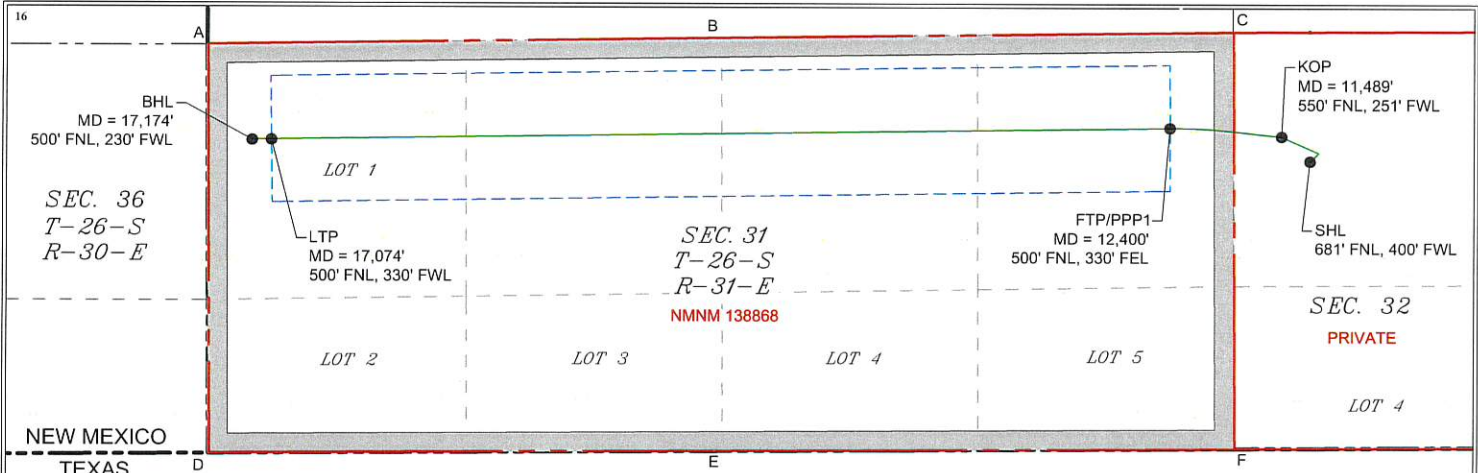
¹ API Number 30-015 -53704	² Pool Code 98220	³ Pool Name PURPLE SAGE; WOLFCAMP (GAS)
⁴ Property Code 333919	⁵ Property Name PHANTOM BANK 31 FEDERAL	⁶ Well Number 511H
⁷ OGRID No. 374034	⁸ Operator Name FLAT CREEK RESOURCES, LLC	⁹ Elevation 3,130'

¹⁰ Surface Location									
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	32	26 S	31 E		681	NORTH	400	WEST	EDDY

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
1	31	26 S	31 E		500	NORTH	230	WEST	EDDY

¹² Dedicated Acres 259.65	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.
NOTE: AS-DRILLED BOTTOM HOLE WAS PLOTTED
FROM DATA FURNISHED BY FLAT CREEK RESOURCES



LEGEND

---	SECTION LINE
---	PROPOSED WELL BORE
---	NEW MEXICO MINERAL LEASE
---	330' BUFFER
---	ALLOCATION AREA

¹⁷ OPERATOR CERTIFICATION

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

Rodney Littleton July 31, 2023 Rodney Littleton
Signature Date Printed Name

rodney.littleton@flatcreekresources.com
E-mail Address

¹⁸ SURVEYOR CERTIFICATION

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

07-03-2023

Date of Survey

Signature and Seal of
Professional Surveyor:

MARK DILLON HARP
23786
PROFESSIONAL SURVEYOR

MARK DILLON HARP 23786
Certificate Number

AR

618.005003.00-01

Flat Creek Resources, LLC
 Phantom Bank 31 Federal 511H
 SHL 681' FNL & 400' FWL 32-26S-31E
 BHL 500' FNL & 230' FWL 31-26S-31E
 Eddy County, NM

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"fee/fee/Fed"

SHL was at 520' FNL & 350' FWL 32-26s-31e. BHL was at 1050' FNL and 30' FWL 31-26s-31e. SHL has now moved 168' SE to 681' FNL & 400' FWL 32-26s-31e. BHL has now moved 585' NE to 500' FNL & 230' FWL 31-26s-31e. Well type has changed from oil to gas. Field and pool have changed from Wildcat; Bone Spring to Purple Sage; Wolfcamp (Gas). Pad has been built. No change in pad footprint.

1. ESTIMATED TOPS

Formation	TVD	MD	Bearing
Quaternary caliche	0'	0'	water
Rustler anhydrite	879'	879'	N/A
Salt top	1501'	1501'	N/A
Salt base	3583'	3585'	water
Lamar limestone	3783'	3785'	N/A
Bell Canyon sandstone	3820'	3822'	N/A
Cherry Canyon sandstone	4743'	4745'	hydrocarbons
Brushy Canyon sandstone	6086'	6091'	hydrocarbons
Bone Spring limestone	7715'	7726'	hydrocarbons
Upper Avalon shale	7848'	7859'	N/A
Lower Avalon shale	8317'	8328'	N/A
First Bone Spring sandstone	8679'	8690'	hydrocarbons
Second Bone Spring shale	8987'	8998'	hydrocarbons
Second Bone Spring sandstone	9320'	9331'	hydrocarbons
Third Bone Spring shale	9817'	9828'	hydrocarbons
Third Bone Spring sandstone	10625'	10636'	hydrocarbons
Wolfcamp XY sandstone	10992'	11003'	hydrocarbons
Wolfcamp A siltstone	11162'	11173'	hydrocarbons
(KOP	11478'	11489'	hydrocarbons
Wolfcamp B siltstone	11605'	11618'	hydrocarbons
Wolfcamp C siltstone	11801'	11832'	hydrocarbons
Wolfcamp D siltstone	11970'	12081'	hydrocarbons
TD (toe-up)	11983'	17174'	hydrocarbons

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"fee/fee/Fed"

2. NOTABLE ZONES

Wolfcamp D is the goal. Depth to water was 318' in C 02165 (24-26s-30e).

3. PRESSURE CONTROL

A 20,000', 10,000 psi BOP stack will consist of a single ram, mud cross and double ram-type (10,000 psi WP) preventer, and an annular preventer (5000-psi WP). Both units will be hydraulically operated. The ram-type will be equipped with blind rams on bottom and drill pipe rams on top. All BOPE will be tested in accordance with 43 CFR 3172. See BOP and choke diagrams submitted with the APD for additional information.

A variance is requested to use a co-flex line between the BOP and choke manifold (instead of using a 4" OD steel line).

BOP Testing Procedures:

1. Use water to test BOPE.
2. Make up test assembly (test plug) and set in the wellhead profile. Ensure the casing valve is left open. Monitor the casing valve outlet while testing for potential leak past the test plug.
3. Circulate through the choke/kill lines, choke manifold, standpipe manifold, and valves to ensure that all lines are full of water. This will prevent pressure drop (compression) while testing.
4. Line up test unit, test rams, valves, and lines as per the following chart.
5. Pressure tests must be low and high, respectively, and the pressure will be maintained for at least 10 minutes. If a test plug is used, no bleed-off of pressure is acceptable. For a test not using a test plug, if a decline in

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pressure of more than 10% in 30 minutes occurs, then the test will be considered to have failed. Pressure will be recorded on a chart recorder.

6. Any equipment that does not pass the pressure test must be reported to the drilling supervisor. Equipment must be repaired and retested.
7. Continue with pressure testing until all equipment has been tested as per the specific rig requirements.
8. Rig down test assembly.
9. All tests and drills will be recorded in the drilling log.

Casing & BOP Equipment Test			
Component	High Test	Low Test	Duration
Wellhead Test	5000 psi	250 psi	10 min
BOP Rams	5000 psi	250 psi	10 min
Annular	3500 psi	250 psi	10 min
HCR	5000 psi	250 psi	10 min
Manifold	5000 psi	250 psi	10 min
Upper/Lower Kelly valves	5000 psi	250 psi	10 min
TIW safety valves/dart	5000 psi	250 psi	10 min
Standpipe/mudlines	5000 psi	250 psi	10 min
Orbit valve/rotating head	300 psi	-	10 min
Surface casing	1500 psi	-	30 min
Production casing	10000 psi	-	30 min

Speed head (see APD) will be installed by a third-party welder under the supervision of the vendor's representative.

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4. CASING & CEMENT

All casing will be new and API.

Hole OD	Set MD	Set TVD	Casing OD	Weight (lb/ft)	Grade	Joint	Collapse	Burst	Tension
17.5"	0' – 950'	0' – 950'	13.375" surface	54.5	J-55	BTC	2.6	6.3	16.5
12.25"	0' – 3700'	0' – 3698'	10.75" intermed. 1	45.5	J-55	BTC	1.1	1.9	4.2
9.875"	0' – 11550'	0' – 11539'	7.625" intermed. 2	29.7	P-110 HC	BTC	1.2	1.7	2.7
6.75"	0' – 11000'	0' – 10989'	5.5" production	20	P-110 HP	GB CD	1.9	1.8	3.1
	11000' – 17714'	10989' – 11983'				Anaconda SP	1.8	1.6	HZ

Name	Type	Sacks	Yield	Cu. Ft.	Weight	Blend
Surface	Lead GL – 650'	540	1.68	907	12.8	35/65 Poz Premium C + 5% salt + 6% bentonite gel + 0.4% CPT-503P + 1/8 #/sk Dura-fiber
	Tail 650' – 900'	315	1.34	422	14.8	Class C + 1% CaCl ₂ + ¼ #/sk cellophane flakes
TOC = GL		100% Excess			Centralizers per Onshore Order 1	
Intermediate 1	Lead GL – 3000'	504	1.68	846	12.8	35/65 Poz Premium C + 5% salt + 6% bentonite gel + 0.4% CPT-503P + 1/8 #/sk Dura-fiber
	Tail 3000' – 3700'	120	1.74	208	14.8	Class C + 1% CaCl ₂ + 4% bentonite gel + 0.4% CPT-503P + 1/8 #/sk Dura-fiber
TOC = GL		35% excess			Bow spring centralizers	
Intermediate 2	Lead GL – 8300'	1135	2.82	3200	10.4	Class C + 10% bwoc light weight bead + 5% silica fume alternative + 0.2%

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						suspension aid + 0.3% fluid loss additive + 0.3% dispersant + 0.2% retarder
	Tail 8300' – 11550'	115	1.42	163	13.5	35/65 Poz Premium H + 0.2% CPT-23
TOC = GL		35% excess			Bow spring centralizers	
Production	Lead GL – 11000'	375	2.82	1057	10.4	Class C + 10% light weight bead + 5% silica fume alternative + 0.2% suspension aid + 0.3% fluid loss additive + 0.3% dispersant + 0.2% retarder
	Tail 11000' – 17714'	420	1.42	596	13.2	35/65 Poz Premium H + 0.2% CPT-23
TOC = GL		15% Excess			Bow & solid body centralizers	

5. MUD PROGRAM

A closed loop system will be used. An electronic pit volume totalizer (PVT) mud system complying with 43 CFR 3172 will monitor pit volumes for gains or losses, flow rate, pump pressures, and stroke rate. Sufficient mud materials (e. g., barite, bentonite, LCM) to maintain mud properties and meet minimum lost circulation and weight increase requirements will always be on site.

Hole	Type	Interval (MD)	lb/gal	Viscosity	Fluid Loss
Surface	fresh water	0' - 950'	8.8	45 - 60	NC
Intermediate 1	brine	950' - 3700'	10.0	28 - 29	NC
Intermediate 2	cut brine	3700' - 11550'	9.2	28 - 29	NC
Production	water base	11550' - 17714'	13.0	38 - 42	6 - 8

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6. CORES, TESTS, & LOGS

No core is planned. GR, resistivity, directional survey, MWD, and mud logs will be run.

7. DOWN HOLE CONDITIONS

No abnormal pressure or temperature is expected. Maximum expected bottom hole pressure is ≈ 6876 psi. Expected bottom hole temperature is $\approx 211^{\circ}$ F.

An H2S plan was attached to the APD per 43 CFR 3176. H2S monitoring equipment will be used from surface casing setting point to TD per 43 CFR 3176.

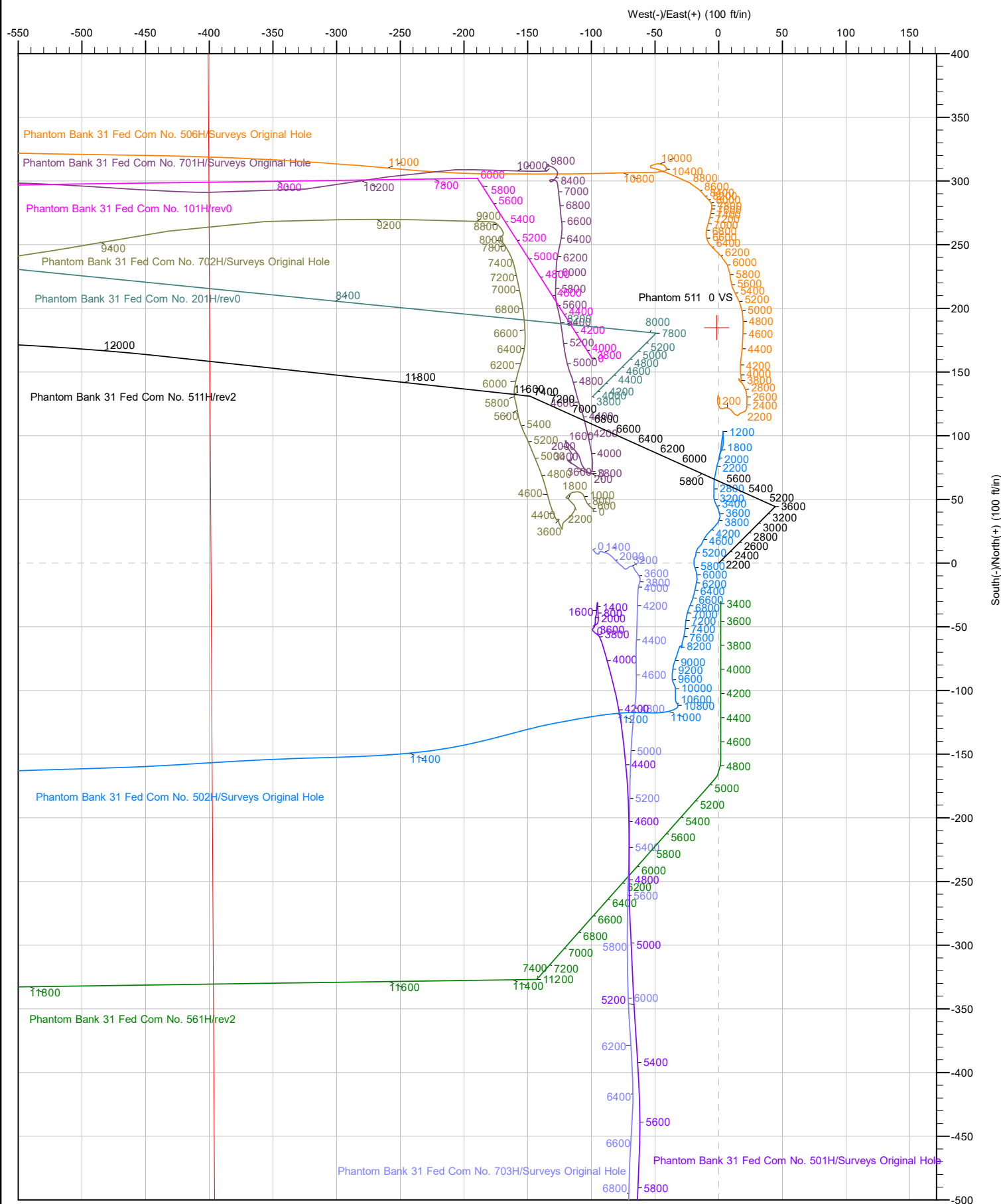
8. OTHER INFORMATION

Anticipated spud date is upon approval. It is expected it will take ≈ 2 months to drill and complete the well.





Well: Phantom Bank 31 Fed Com No. 511H
Site: Phantom Bank 31 Fed Com
Project: Eddy County, New Mexico NAD27 NME
Design: rev2



FLAT CREEK
RESOURCES

Planning Report

Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well Phantom Bank 31 Fed Com No. 511H
Company:	Flat Creek Resources, LLC	TVD Reference:	RKB=3129+25 @ 3154.00ft
Project:	Eddy County, New Mexico NAD27 NME	MD Reference:	RKB=3129+25 @ 3154.00ft
Site:	Phantom Bank 31 Fed Com	North Reference:	Grid
Well:	Phantom Bank 31 Fed Com No. 511H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev2		

Project	Eddy County, New Mexico NAD27 NME		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site	Phantom Bank 31 Fed Com			
Site Position:		Northing:	365,652.329 usft	Latitude: 32.004202000
From:	Lat/Long	Easting:	663,006.861 usft	Longitude: -103.807475000
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "	

Well	Phantom Bank 31 Fed Com No. 511H, Surf loc: 681 FNL 400 FWL Section 32-T26S-R31E			
Well Position	+N/-S	0.00 ft	Northing:	365,641.800 usft
	+E/-W	0.00 ft	Easting:	663,105.471 usft
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft
Grid Convergence:		0.28 °	Ground Level:	3,129.00 ft

Wellbore	Original Hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	5/24/2023	6.41	59.60	47,139.60072594

Design	rev2			
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	269.180

Plan Survey Tool Program	Date	6/28/2023		
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	17,174.08	rev2 (Original Hole)	MWD
				OWSG MWD - Standard



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Well:	Phantom Bank 31 Fed Com No. 511H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev2		

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,000.00	0.00	0.000	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,300.00	3.00	45.000	2,299.86	5.55	5.55	1.00	1.00	0.00	45.00	
3,200.00	3.00	45.000	3,198.63	38.86	38.86	0.00	0.00	0.00	0.00	
3,500.00	0.00	45.000	3,498.49	44.41	44.41	1.00	-1.00	0.00	180.00	
5,001.51	0.00	45.000	5,000.00	44.41	44.41	0.00	0.00	0.00	45.00	
5,272.23	5.41	294.239	5,270.32	49.66	32.76	2.00	2.00	-40.91	294.24	
7,240.37	5.41	294.239	7,229.68	125.90	-136.58	0.00	0.00	0.00	0.00	
7,511.09	0.00	0.000	7,500.00	131.15	-148.24	2.00	-2.00	0.00	180.00	
11,489.09	0.00	0.000	11,478.00	131.15	-148.24	0.00	0.00	0.00	0.00	
12,089.09	60.00	276.200	11,974.20	162.09	-433.04	10.00	10.00	0.00	276.20	
12,404.66	90.84	269.179	12,052.78	174.91	-734.29	10.00	9.77	-2.22	-13.51	
17,074.07	90.84	269.179	11,984.47	108.00	-5,402.72	0.00	0.00	0.00	0.00	Phantom 511 LTP 50
17,174.08	90.84	269.179	11,983.01	106.57	-5,502.71	0.00	0.00	0.00	0.00	Phantom 511 PBHL 5

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Site:	Phantom Bank 31 Fed Com	North Reference:	Grid
Well:	Phantom Bank 31 Fed Com No. 511H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev2		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25.00	0.00	0.000	25.00	0.00	0.00	0.00	0.00	0.00	0.00
ALLUVIUM									
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	0.00	0.000	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.000	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.000	800.00	0.00	0.00	0.00	0.00	0.00	0.00
879.00	0.00	0.000	879.00	0.00	0.00	0.00	0.00	0.00	0.00
RUSLTER									
900.00	0.00	0.000	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.000	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.000	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.000	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.000	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.000	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.000	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,501.00	0.00	0.000	1,501.00	0.00	0.00	0.00	0.00	0.00	0.00
TOP SALT									
1,600.00	0.00	0.000	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.000	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.000	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.000	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.000	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
KOP Begin 1°/100' build									
2,100.00	1.00	45.000	2,099.99	0.62	0.62	-0.63	1.00	1.00	0.00
2,200.00	2.00	45.000	2,199.96	2.47	2.47	-2.50	1.00	1.00	0.00
2,300.00	3.00	45.000	2,299.86	5.55	5.55	-5.63	1.00	1.00	0.00
Begin 3.00° tangent									
2,400.00	3.00	45.000	2,399.73	9.25	9.25	-9.38	0.00	0.00	0.00
2,500.00	3.00	45.000	2,499.59	12.95	12.95	-13.14	0.00	0.00	0.00
2,600.00	3.00	45.000	2,599.45	16.65	16.65	-16.89	0.00	0.00	0.00
2,700.00	3.00	45.000	2,699.31	20.36	20.36	-20.64	0.00	0.00	0.00
2,800.00	3.00	45.000	2,799.18	24.06	24.06	-24.40	0.00	0.00	0.00
2,900.00	3.00	45.000	2,899.04	27.76	27.76	-28.15	0.00	0.00	0.00
3,000.00	3.00	45.000	2,998.90	31.46	31.46	-31.90	0.00	0.00	0.00
3,100.00	3.00	45.000	3,098.77	35.16	35.16	-35.66	0.00	0.00	0.00
3,200.00	3.00	45.000	3,198.63	38.86	38.86	-39.41	0.00	0.00	0.00
Begin 1°/100' drop									
3,300.00	2.00	45.000	3,298.53	41.94	41.94	-42.54	1.00	-1.00	0.00
3,400.00	1.00	45.000	3,398.50	43.79	43.79	-44.42	1.00	-1.00	0.00
3,500.00	0.00	45.000	3,498.49	44.41	44.41	-45.04	1.00	-1.00	0.00
Begin vertical hold @ 3198.90 TVD									
3,584.85	0.00	45.000	3,583.34	44.41	44.41	-45.04	0.00	0.00	0.00
BASE SALT									
3,600.00	0.00	45.000	3,598.49	44.41	44.41	-45.04	0.00	0.00	0.00
3,700.00	0.00	45.000	3,698.49	44.41	44.41	-45.04	0.00	0.00	0.00
3,784.85	0.00	45.000	3,783.34	44.41	44.41	-45.04	0.00	0.00	0.00
LAMAR									
3,800.00	0.00	45.000	3,798.49	44.41	44.41	-45.04	0.00	0.00	0.00

FLAT CREEK
RESOURCES

Planning Report

Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well Phantom Bank 31 Fed Com No. 511H
Company:	Flat Creek Resources, LLC	TVD Reference:	RKB=3129+25 @ 3154.00ft
Project:	Eddy County, New Mexico NAD27 NME	MD Reference:	RKB=3129+25 @ 3154.00ft
Site:	Phantom Bank 31 Fed Com	North Reference:	Grid
Well:	Phantom Bank 31 Fed Com No. 511H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev2		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
3,821.85	0.00	45.000	3,820.34	44.41	44.41	-45.04	0.00	0.00	0.00
BELL CANYON									
3,900.00	0.00	45.000	3,898.49	44.41	44.41	-45.04	0.00	0.00	0.00
4,000.00	0.00	45.000	3,998.49	44.41	44.41	-45.04	0.00	0.00	0.00
4,100.00	0.00	45.000	4,098.49	44.41	44.41	-45.04	0.00	0.00	0.00
4,200.00	0.00	45.000	4,198.49	44.41	44.41	-45.04	0.00	0.00	0.00
4,300.00	0.00	45.000	4,298.49	44.41	44.41	-45.04	0.00	0.00	0.00
4,400.00	0.00	45.000	4,398.49	44.41	44.41	-45.04	0.00	0.00	0.00
4,500.00	0.00	45.000	4,498.49	44.41	44.41	-45.04	0.00	0.00	0.00
4,600.00	0.00	45.000	4,598.49	44.41	44.41	-45.04	0.00	0.00	0.00
4,700.00	0.00	45.000	4,698.49	44.41	44.41	-45.04	0.00	0.00	0.00
4,744.85	0.00	45.000	4,743.34	44.41	44.41	-45.04	0.00	0.00	0.00
CHERRY CANYON									
4,800.00	0.00	45.000	4,798.49	44.41	44.41	-45.04	0.00	0.00	0.00
4,900.00	0.00	45.000	4,898.49	44.41	44.41	-45.04	0.00	0.00	0.00
5,001.51	0.00	0.000	5,000.00	44.41	44.41	-45.04	0.00	0.00	0.00
Begin 2°/100' build									
5,100.00	1.97	294.239	5,098.47	45.11	42.87	-43.51	2.00	2.00	0.00
5,200.00	3.97	294.239	5,198.33	47.23	38.14	-38.82	2.00	2.00	0.00
5,272.23	5.41	294.239	5,270.32	49.66	32.76	-33.46	2.00	2.00	0.00
Begin 5.41° tangent									
5,300.00	5.41	294.239	5,297.97	50.73	30.37	-31.09	0.00	0.00	0.00
5,400.00	5.41	294.239	5,397.52	54.61	21.76	-22.54	0.00	0.00	0.00
5,500.00	5.41	294.239	5,497.07	58.48	13.16	-13.99	0.00	0.00	0.00
5,600.00	5.41	294.239	5,596.63	62.36	4.55	-5.45	0.00	0.00	0.00
5,700.00	5.41	294.239	5,696.18	66.23	-4.05	3.10	0.00	0.00	0.00
5,800.00	5.41	294.239	5,795.74	70.10	-12.65	11.65	0.00	0.00	0.00
5,900.00	5.41	294.239	5,895.29	73.98	-21.26	20.20	0.00	0.00	0.00
6,000.00	5.41	294.239	5,994.84	77.85	-29.86	28.74	0.00	0.00	0.00
6,091.10	5.41	294.239	6,085.54	81.38	-37.70	36.53	0.00	0.00	0.00
BRUSHY CANYON									
6,100.00	5.41	294.239	6,094.40	81.73	-38.47	37.29	0.00	0.00	0.00
6,200.00	5.41	294.239	6,193.95	85.60	-47.07	45.84	0.00	0.00	0.00
6,300.00	5.41	294.239	6,293.50	89.47	-55.67	54.39	0.00	0.00	0.00
6,400.00	5.41	294.239	6,393.06	93.35	-64.28	62.94	0.00	0.00	0.00
6,500.00	5.41	294.239	6,492.61	97.22	-72.88	71.48	0.00	0.00	0.00
6,600.00	5.41	294.239	6,592.17	101.10	-81.49	80.03	0.00	0.00	0.00
6,700.00	5.41	294.239	6,691.72	104.97	-90.09	88.58	0.00	0.00	0.00
6,800.00	5.41	294.239	6,791.27	108.84	-98.69	97.13	0.00	0.00	0.00
6,900.00	5.41	294.239	6,890.83	112.72	-107.30	105.67	0.00	0.00	0.00
7,000.00	5.41	294.239	6,990.38	116.59	-115.90	114.22	0.00	0.00	0.00
7,100.00	5.41	294.239	7,089.93	120.46	-124.51	122.77	0.00	0.00	0.00
7,200.00	5.41	294.239	7,189.49	124.34	-133.11	131.32	0.00	0.00	0.00
7,240.37	5.41	294.239	7,229.68	125.90	-136.58	134.77	0.00	0.00	0.00
Begin 2°/100' drop									
7,300.00	4.22	294.239	7,289.10	127.96	-141.15	139.31	2.00	-2.00	0.00
7,400.00	2.22	294.239	7,388.93	130.27	-146.28	144.40	2.00	-2.00	0.00
7,500.00	0.22	294.239	7,488.91	131.14	-148.22	146.33	2.00	-2.00	0.00
7,511.09	0.00	0.000	7,500.00	131.15	-148.24	146.35	2.00	-2.00	0.00
Begin vertical hold @ 7500.00 TVD									
7,600.00	0.00	0.000	7,588.91	131.15	-148.24	146.35	0.00	0.00	0.00
7,700.00	0.00	0.000	7,688.91	131.15	-148.24	146.35	0.00	0.00	0.00
7,726.24	0.00	0.000	7,715.15	131.15	-148.24	146.35	0.00	0.00	0.00

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Site:	Phantom Bank 31 Fed Com	North Reference:	Grid
Well:	Phantom Bank 31 Fed Com No. 511H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev2		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
BONE SPRING LIME									
7,800.00	0.00	0.000	7,788.91	131.15	-148.24	146.35	0.00	0.00	0.00
7,859.24	0.00	0.000	7,848.15	131.15	-148.24	146.35	0.00	0.00	0.00
UPPER AVALON SHALE									
7,900.00	0.00	0.000	7,888.91	131.15	-148.24	146.35	0.00	0.00	0.00
8,000.00	0.00	0.000	7,988.91	131.15	-148.24	146.35	0.00	0.00	0.00
8,100.00	0.00	0.000	8,088.91	131.15	-148.24	146.35	0.00	0.00	0.00
8,200.00	0.00	0.000	8,188.91	131.15	-148.24	146.35	0.00	0.00	0.00
8,300.00	0.00	0.000	8,288.91	131.15	-148.24	146.35	0.00	0.00	0.00
8,328.24	0.00	0.000	8,317.15	131.15	-148.24	146.35	0.00	0.00	0.00
LOWER AVALON SHALE									
8,400.00	0.00	0.000	8,388.91	131.15	-148.24	146.35	0.00	0.00	0.00
8,500.00	0.00	0.000	8,488.91	131.15	-148.24	146.35	0.00	0.00	0.00
8,600.00	0.00	0.000	8,588.91	131.15	-148.24	146.35	0.00	0.00	0.00
8,690.24	0.00	0.000	8,679.15	131.15	-148.24	146.35	0.00	0.00	0.00
1ST BONE SPRING SAND									
8,700.00	0.00	0.000	8,688.91	131.15	-148.24	146.35	0.00	0.00	0.00
8,800.00	0.00	0.000	8,788.91	131.15	-148.24	146.35	0.00	0.00	0.00
8,900.00	0.00	0.000	8,888.91	131.15	-148.24	146.35	0.00	0.00	0.00
8,998.24	0.00	0.000	8,987.15	131.15	-148.24	146.35	0.00	0.00	0.00
2ND BONE SPRING SHALE									
9,000.00	0.00	0.000	8,988.91	131.15	-148.24	146.35	0.00	0.00	0.00
9,100.00	0.00	0.000	9,088.91	131.15	-148.24	146.35	0.00	0.00	0.00
9,200.00	0.00	0.000	9,188.91	131.15	-148.24	146.35	0.00	0.00	0.00
9,300.00	0.00	0.000	9,288.91	131.15	-148.24	146.35	0.00	0.00	0.00
9,331.24	0.00	0.000	9,320.15	131.15	-148.24	146.35	0.00	0.00	0.00
2ND BONE SPRING SAND									
9,400.00	0.00	0.000	9,388.91	131.15	-148.24	146.35	0.00	0.00	0.00
9,500.00	0.00	0.000	9,488.91	131.15	-148.24	146.35	0.00	0.00	0.00
9,600.00	0.00	0.000	9,588.91	131.15	-148.24	146.35	0.00	0.00	0.00
9,700.00	0.00	0.000	9,688.91	131.15	-148.24	146.35	0.00	0.00	0.00
9,800.00	0.00	0.000	9,788.91	131.15	-148.24	146.35	0.00	0.00	0.00
9,828.24	0.00	0.000	9,817.15	131.15	-148.24	146.35	0.00	0.00	0.00
3RD BONE SPRING SHALE									
9,900.00	0.00	0.000	9,888.91	131.15	-148.24	146.35	0.00	0.00	0.00
10,000.00	0.00	0.000	9,988.91	131.15	-148.24	146.35	0.00	0.00	0.00
10,100.00	0.00	0.000	10,088.91	131.15	-148.24	146.35	0.00	0.00	0.00
10,200.00	0.00	0.000	10,188.91	131.15	-148.24	146.35	0.00	0.00	0.00
10,300.00	0.00	0.000	10,288.91	131.15	-148.24	146.35	0.00	0.00	0.00
10,400.00	0.00	0.000	10,388.91	131.15	-148.24	146.35	0.00	0.00	0.00
10,500.00	0.00	0.000	10,488.91	131.15	-148.24	146.35	0.00	0.00	0.00
10,600.00	0.00	0.000	10,588.91	131.15	-148.24	146.35	0.00	0.00	0.00
10,636.24	0.00	0.000	10,625.15	131.15	-148.24	146.35	0.00	0.00	0.00
3RD BONE SPRING SAND									
10,700.00	0.00	0.000	10,688.91	131.15	-148.24	146.35	0.00	0.00	0.00
10,800.00	0.00	0.000	10,788.91	131.15	-148.24	146.35	0.00	0.00	0.00
10,900.00	0.00	0.000	10,888.91	131.15	-148.24	146.35	0.00	0.00	0.00
11,000.00	0.00	0.000	10,988.91	131.15	-148.24	146.35	0.00	0.00	0.00
11,003.24	0.00	0.000	10,992.15	131.15	-148.24	146.35	0.00	0.00	0.00
WOLFCAMP X/Y									
11,100.00	0.00	0.000	11,088.91	131.15	-148.24	146.35	0.00	0.00	0.00
11,173.24	0.00	0.000	11,162.15	131.15	-148.24	146.35	0.00	0.00	0.00

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Wellbore:	Original Hole		
Design:	rev2		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
WOLFCAMP A									
11,200.00	0.00	0.000	11,188.91	131.15	-148.24	146.35	0.00	0.00	0.00
11,300.00	0.00	0.000	11,288.91	131.15	-148.24	146.35	0.00	0.00	0.00
11,400.00	0.00	0.000	11,388.91	131.15	-148.24	146.35	0.00	0.00	0.00
11,489.09	0.00	0.000	11,478.00	131.15	-148.24	146.35	0.00	0.00	0.00
Begin 10°/100' build									
11,500.00	1.09	276.200	11,488.90	131.16	-148.34	146.45	10.00	10.00	0.00
11,550.00	6.09	276.200	11,538.79	131.50	-151.46	149.56	10.00	10.00	0.00
11,600.00	11.09	276.200	11,588.21	132.31	-158.88	156.97	10.00	10.00	0.00
11,617.52	12.84	276.200	11,605.35	132.70	-162.49	160.57	10.00	10.00	0.00
WOLFCAMP B									
11,650.00	16.09	276.200	11,636.80	133.57	-170.55	168.63	10.00	10.00	0.00
11,700.00	21.09	276.200	11,684.17	135.30	-186.40	184.44	10.00	10.00	0.00
11,750.00	26.09	276.200	11,729.98	137.46	-206.28	204.29	10.00	10.00	0.00
11,800.00	31.09	276.200	11,773.87	140.04	-230.06	228.03	10.00	10.00	0.00
11,831.75	34.27	276.200	11,800.59	141.89	-247.10	245.05	10.00	10.00	0.00
WOLFCAMP C									
11,850.00	36.09	276.200	11,815.51	143.03	-257.55	255.48	10.00	10.00	0.00
11,900.00	41.09	276.200	11,854.58	146.39	-288.55	286.43	10.00	10.00	0.00
11,950.00	46.09	276.200	11,890.78	150.11	-322.81	320.63	10.00	10.00	0.00
12,000.00	51.09	276.200	11,923.84	154.16	-360.08	357.84	10.00	10.00	0.00
12,050.00	56.09	276.200	11,953.51	158.51	-400.07	397.76	10.00	10.00	0.00
12,081.23	59.21	276.200	11,970.22	161.36	-426.30	423.94	10.00	10.00	0.00
WOLFCAMP D									
12,089.09	60.00	276.200	11,974.20	162.09	-433.04	430.68	10.00	10.00	0.00
Begin 10°/100' build/turn									
12,100.00	61.06	275.909	11,979.56	163.09	-442.48	440.11	10.00	9.73	-2.67
12,150.00	65.93	274.645	12,001.87	167.19	-487.03	484.58	10.00	9.74	-2.53
12,200.00	70.81	273.474	12,020.29	170.48	-533.37	530.88	10.00	9.76	-2.34
12,250.00	75.70	272.370	12,034.69	172.91	-581.18	578.64	10.00	9.77	-2.21
12,300.00	80.59	271.313	12,044.96	174.48	-630.07	627.51	10.00	9.78	-2.11
12,350.00	85.49	270.286	12,051.02	175.17	-679.68	677.10	10.00	9.79	-2.05
12,404.66	90.84	269.179	12,052.78	174.91	-734.29	731.71	10.00	9.79	-2.03
Begin 90.84° lateral									
12,500.00	90.84	269.179	12,051.38	173.55	-829.61	827.04	0.00	0.00	0.00
12,600.00	90.84	269.179	12,049.92	172.11	-929.59	927.03	0.00	0.00	0.00
12,700.00	90.84	269.179	12,048.46	170.68	-1,029.57	1,027.02	0.00	0.00	0.00
12,800.00	90.84	269.179	12,046.99	169.25	-1,129.55	1,127.01	0.00	0.00	0.00
12,900.00	90.84	269.179	12,045.53	167.81	-1,229.53	1,227.00	0.00	0.00	0.00
13,000.00	90.84	269.179	12,044.07	166.38	-1,329.51	1,326.99	0.00	0.00	0.00
13,100.00	90.84	269.179	12,042.60	164.95	-1,429.49	1,426.98	0.00	0.00	0.00
13,200.00	90.84	269.179	12,041.14	163.51	-1,529.46	1,526.97	0.00	0.00	0.00
13,300.00	90.84	269.179	12,039.68	162.08	-1,629.44	1,626.96	0.00	0.00	0.00
13,400.00	90.84	269.179	12,038.22	160.65	-1,729.42	1,726.95	0.00	0.00	0.00
13,500.00	90.84	269.179	12,036.75	159.22	-1,829.40	1,826.94	0.00	0.00	0.00
13,600.00	90.84	269.179	12,035.29	157.78	-1,929.38	1,926.92	0.00	0.00	0.00
13,700.00	90.84	269.179	12,033.83	156.35	-2,029.36	2,026.91	0.00	0.00	0.00
13,800.00	90.84	269.179	12,032.36	154.92	-2,129.34	2,126.90	0.00	0.00	0.00
13,900.00	90.84	269.179	12,030.90	153.48	-2,229.32	2,226.89	0.00	0.00	0.00
14,000.00	90.84	269.179	12,029.44	152.05	-2,329.30	2,326.88	0.00	0.00	0.00
14,100.00	90.84	269.179	12,027.98	150.62	-2,429.28	2,426.87	0.00	0.00	0.00
14,200.00	90.84	269.179	12,026.51	149.18	-2,529.25	2,526.86	0.00	0.00	0.00
14,300.00	90.84	269.179	12,025.05	147.75	-2,629.23	2,626.85	0.00	0.00	0.00



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14,400.00	90.84	269.179	12,023.59	146.32	-2,729.21	2,726.84	0.00	0.00	0.00
14,500.00	90.84	269.179	12,022.12	144.89	-2,829.19	2,826.83	0.00	0.00	0.00
14,600.00	90.84	269.179	12,020.66	143.45	-2,929.17	2,926.82	0.00	0.00	0.00
14,700.00	90.84	269.179	12,019.20	142.02	-3,029.15	3,026.81	0.00	0.00	0.00
14,800.00	90.84	269.179	12,017.74	140.59	-3,129.13	3,126.80	0.00	0.00	0.00
14,900.00	90.84	269.179	12,016.27	139.15	-3,229.11	3,226.79	0.00	0.00	0.00
15,000.00	90.84	269.179	12,014.81	137.72	-3,329.09	3,326.78	0.00	0.00	0.00
15,100.00	90.84	269.179	12,013.35	136.29	-3,429.07	3,426.76	0.00	0.00	0.00
15,200.00	90.84	269.179	12,011.88	134.86	-3,529.05	3,526.75	0.00	0.00	0.00
15,300.00	90.84	269.179	12,010.42	133.42	-3,629.02	3,626.74	0.00	0.00	0.00
15,400.00	90.84	269.179	12,008.96	131.99	-3,729.00	3,726.73	0.00	0.00	0.00
15,500.00	90.84	269.179	12,007.50	130.56	-3,828.98	3,826.72	0.00	0.00	0.00
15,600.00	90.84	269.179	12,006.03	129.12	-3,928.96	3,926.71	0.00	0.00	0.00
15,700.00	90.84	269.179	12,004.57	127.69	-4,028.94	4,026.70	0.00	0.00	0.00
15,800.00	90.84	269.179	12,003.11	126.26	-4,128.92	4,126.69	0.00	0.00	0.00
15,900.00	90.84	269.179	12,001.64	124.82	-4,228.90	4,226.68	0.00	0.00	0.00
16,000.00	90.84	269.179	12,000.18	123.39	-4,328.88	4,326.67	0.00	0.00	0.00
16,100.00	90.84	269.179	11,998.72	121.96	-4,428.86	4,426.66	0.00	0.00	0.00
16,200.00	90.84	269.179	11,997.26	120.53	-4,528.84	4,526.65	0.00	0.00	0.00
16,300.00	90.84	269.179	11,995.79	119.09	-4,628.81	4,626.64	0.00	0.00	0.00
16,400.00	90.84	269.179	11,994.33	117.66	-4,728.79	4,726.63	0.00	0.00	0.00
16,500.00	90.84	269.179	11,992.87	116.23	-4,828.77	4,826.61	0.00	0.00	0.00
16,600.00	90.84	269.179	11,991.41	114.79	-4,928.75	4,926.60	0.00	0.00	0.00
16,700.00	90.84	269.179	11,989.94	113.36	-5,028.73	5,026.59	0.00	0.00	0.00
16,800.00	90.84	269.179	11,988.48	111.93	-5,128.71	5,126.58	0.00	0.00	0.00
16,900.00	90.84	269.179	11,987.02	110.49	-5,228.69	5,226.57	0.00	0.00	0.00
17,000.00	90.84	269.179	11,985.55	109.06	-5,328.67	5,326.56	0.00	0.00	0.00
17,074.07	90.84	269.179	11,984.47	108.00	-5,402.72	5,400.62	0.00	0.00	0.00
LTP @ 17074.07 MD 11984.47 TVD									
17,100.00	90.84	269.179	11,984.09	107.63	-5,428.65	5,426.55	0.00	0.00	0.00
17,174.08	90.84	269.179	11,983.01	106.57	-5,502.71	5,500.62	0.00	0.00	0.00
PBHL/TD @ 17174.46 MD 11983.01 TVD									

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Phantom 511 PBHL 50C - plan misses target center by 0.03ft at 17174.08ft MD (11983.01 TVD, 106.57 N, -5502.71 E) - Point	0.00	0.000	11,983.00	106.60	-5,502.71	365,748.400	657,602.770	32.004537162	-103.824906484
Phantom 511 LTP 500 F - plan hits target center - Point	0.00	0.000	11,984.47	108.00	-5,402.72	365,749.800	657,702.760	32.004539718	-103.824583906
Phantom 511 FTP 500 F - plan misses target center by 0.59ft at 12399.96ft MD (12052.83 TVD, 174.98 N, -729.59 E) - Point	0.00	0.000	12,053.28	174.60	-729.57	365,816.400	662,375.900	32.004661448	-103.809507837
Phantom 511 O VS - plan misses target center by 356.78ft at 11888.33ft MD (11845.70 TVD, 145.57 N, -281.01 E) - Point	0.00	0.000	12,064.00	184.97	-1.57	365,826.769	663,103.900	32.004680235	-103.807159227

FLAT CREEK
RESOURCES

Planning Report

Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well Phantom Bank 31 Fed Com No. 511H
Company:	Flat Creek Resources, LLC	TVD Reference:	RKB=3129+25 @ 3154.00ft
Project:	Eddy County, New Mexico NAD27 NME	MD Reference:	RKB=3129+25 @ 3154.00ft
Site:	Phantom Bank 31 Fed Com	North Reference:	Grid
Well:	Phantom Bank 31 Fed Com No. 511H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev2		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
25.00	25.00	ALLUVIUM		0.84	269.180	
879.00	879.00	RUSLTER		0.84	269.180	
1,501.00	1,501.00	TOP SALT		0.84	269.180	
3,584.85	3,583.34	BASE SALT		0.84	269.180	
3,784.85	3,783.34	LAMAR		0.84	269.180	
3,821.85	3,820.34	BELL CANYON		0.84	269.180	
4,744.85	4,743.34	CHERRY CANYON		0.84	269.180	
6,091.10	6,085.54	BRUSHY CANYON		0.84	269.180	
7,726.24	7,715.15	BONE SPRING LIME		0.84	269.180	
7,859.24	7,848.15	UPPER AVALON SHALE		0.84	269.180	
8,328.24	8,317.15	LOWER AVALON SHALE		0.84	269.180	
8,690.24	8,679.15	1ST BONE SPRING SAND		0.84	269.180	
8,998.24	8,987.15	2ND BONE SPRING SHALE		0.84	269.180	
9,331.24	9,320.15	2ND BONE SPRING SAND		0.84	269.180	
9,828.24	9,817.15	3RD BONE SPRING SHALE		0.84	269.180	
10,636.24	10,625.15	3RD BONE SPRING SAND		0.84	269.180	
11,003.24	10,992.15	WOLFCAMP X/Y		0.84	269.180	
11,173.24	11,162.15	WOLFCAMP A		0.84	269.180	
11,617.52	11,605.35	WOLFCAMP B		0.84	269.180	
11,831.75	11,800.59	WOLFCAMP C		0.84	269.180	
12,081.23	11,970.22	WOLFCAMP D		0.84	269.180	

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
2,000.00	2,000.00	0.00	0.00	KOP Begin 1°/100' build	
2,300.00	2,299.86	5.55	5.55	Begin 3.00° tangent	
3,200.00	3,198.63	38.86	38.86	Begin 1°/100' drop	
3,500.00	3,498.49	44.41	44.41	Begin vertical hold @ 3198.90 TVD	
5,001.51	5,000.00	44.41	44.41	Begin 2°/100' build	
5,272.23	5,270.32	49.66	32.76	Begin 5.41° tangent	
7,240.37	7,229.68	125.90	-136.58	Begin 2°/100' drop	
7,511.09	7,500.00	131.15	-148.24	Begin vertical hold @ 7500.00 TVD	
11,489.09	11,478.00	131.15	-148.24	Begin 10°/100' build	
12,089.09	11,974.20	162.09	-433.04	Begin 10°/100' build/turn	
12,404.66	12,052.78	174.91	-734.29	Begin 90.84° lateral	
17,074.07	11,984.47	108.00	-5,402.72	LTP @ 17074.07 MD 11984.47 TVD	
17,174.08	11,983.01	106.57	-5,502.71	PBHL/TD @ 17174.46 MD 11983.01 TVD	

FLAT CREEK
RESOURCES

Planning Report - Geographic

Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well Phantom Bank 31 Fed Com No. 511H
Company:	Flat Creek Resources, LLC	TVD Reference:	RKB=3129+25 @ 3154.00ft
Project:	Eddy County, New Mexico NAD27 NME	MD Reference:	RKB=3129+25 @ 3154.00ft
Site:	Phantom Bank 31 Fed Com	North Reference:	Grid
Well:	Phantom Bank 31 Fed Com No. 511H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev2		

Project	Eddy County, New Mexico NAD27 NME		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site	Phantom Bank 31 Fed Com		
Site Position:		Northing:	365,652.329 usft
From:	Lat/Long	Easting:	663,006.861 usft
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "
		Latitude:	32.004202000
		Longitude:	-103.807475000

Well	Phantom Bank 31 Fed Com No. 511H, Surf loc: 681 FNL 400 FWL Section 32-T26S-R31E		
Well Position	+N/-S	0.00 ft	Northing: 365,641.800 usft
	+E/-W	0.00 ft	Easting: 663,105.471 usft
Position Uncertainty	0.00 ft	Wellhead Elevation:	ft
Grid Convergence:	0.28 °	Ground Level:	3,129.00 ft

Wellbore	Original Hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	5/24/2023	6.41	59.60	47,139.60072594

Design	rev2			
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	269.180

Plan Survey Tool Program	Date	6/28/2023		
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	17,174.08 rev2 (Original Hole)	MWD	
			OWSG MWD - Standard	



Planning Report - Geographic

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Project:	Eddy County, New Mexico NAD27 NME	MD Reference:	RKB=3129+25 @ 3154.00ft
Site:	Phantom Bank 31 Fed Com	North Reference:	Grid
Well:	Phantom Bank 31 Fed Com No. 511H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev2		

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,000.00	0.00	0.000	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,300.00	3.00	45.000	2,299.86	5.55	5.55	1.00	1.00	0.00	45.00	
3,200.00	3.00	45.000	3,198.63	38.86	38.86	0.00	0.00	0.00	0.00	
3,500.00	0.00	45.000	3,498.49	44.41	44.41	1.00	-1.00	0.00	180.00	
5,001.51	0.00	45.000	5,000.00	44.41	44.41	0.00	0.00	0.00	45.00	
5,272.23	5.41	294.239	5,270.32	49.66	32.76	2.00	2.00	-40.91	294.24	
7,240.37	5.41	294.239	7,229.68	125.90	-136.58	0.00	0.00	0.00	0.00	
7,511.09	0.00	0.000	7,500.00	131.15	-148.24	2.00	-2.00	0.00	180.00	
11,489.09	0.00	0.000	11,478.00	131.15	-148.24	0.00	0.00	0.00	0.00	
12,089.09	60.00	276.200	11,974.20	162.09	-433.04	10.00	10.00	0.00	276.20	
12,404.66	90.84	269.179	12,052.78	174.91	-734.29	10.00	9.77	-2.22	-13.51	
17,074.07	90.84	269.179	11,984.47	108.00	-5,402.72	0.00	0.00	0.00	0.00	Phantom 511 LTP 50
17,174.08	90.84	269.179	11,983.01	106.57	-5,502.71	0.00	0.00	0.00	0.00	Phantom 511 PBHL 50

FLAT CREEK
RESOURCES

Planning Report - Geographic

Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well Phantom Bank 31 Fed Com No. 511H
Company:	Flat Creek Resources, LLC	TVD Reference:	RKB=3129+25 @ 3154.00ft
Project:	Eddy County, New Mexico NAD27 NME	MD Reference:	RKB=3129+25 @ 3154.00ft
Site:	Phantom Bank 31 Fed Com	North Reference:	Grid
Well:	Phantom Bank 31 Fed Com No. 511H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev2		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.00	0.00	0.000	0.00	0.00	0.00	365,641.800	663,105.471	32.004171737	-103.807157063
25.00	0.00	0.000	25.00	0.00	0.00	365,641.800	663,105.471	32.004171737	-103.807157063
ALLUVIUM									
100.00	0.00	0.000	100.00	0.00	0.00	365,641.800	663,105.471	32.004171737	-103.807157063
200.00	0.00	0.000	200.00	0.00	0.00	365,641.800	663,105.471	32.004171737	-103.807157063
300.00	0.00	0.000	300.00	0.00	0.00	365,641.800	663,105.471	32.004171737	-103.807157063
400.00	0.00	0.000	400.00	0.00	0.00	365,641.800	663,105.471	32.004171737	-103.807157063
500.00	0.00	0.000	500.00	0.00	0.00	365,641.800	663,105.471	32.004171737	-103.807157063
600.00	0.00	0.000	600.00	0.00	0.00	365,641.800	663,105.471	32.004171737	-103.807157063
700.00	0.00	0.000	700.00	0.00	0.00	365,641.800	663,105.471	32.004171737	-103.807157063
800.00	0.00	0.000	800.00	0.00	0.00	365,641.800	663,105.471	32.004171737	-103.807157063
879.00	0.00	0.000	879.00	0.00	0.00	365,641.800	663,105.471	32.004171737	-103.807157063
RUSLTER									
900.00	0.00	0.000	900.00	0.00	0.00	365,641.800	663,105.471	32.004171737	-103.807157063
1,000.00	0.00	0.000	1,000.00	0.00	0.00	365,641.800	663,105.471	32.004171737	-103.807157063
1,100.00	0.00	0.000	1,100.00	0.00	0.00	365,641.800	663,105.471	32.004171737	-103.807157063
1,200.00	0.00	0.000	1,200.00	0.00	0.00	365,641.800	663,105.471	32.004171737	-103.807157063
1,300.00	0.00	0.000	1,300.00	0.00	0.00	365,641.800	663,105.471	32.004171737	-103.807157063
1,400.00	0.00	0.000	1,400.00	0.00	0.00	365,641.800	663,105.471	32.004171737	-103.807157063
1,500.00	0.00	0.000	1,500.00	0.00	0.00	365,641.800	663,105.471	32.004171737	-103.807157063
1,501.00	0.00	0.000	1,501.00	0.00	0.00	365,641.800	663,105.471	32.004171737	-103.807157063
TOP SALT									
1,600.00	0.00	0.000	1,600.00	0.00	0.00	365,641.800	663,105.471	32.004171737	-103.807157063
1,700.00	0.00	0.000	1,700.00	0.00	0.00	365,641.800	663,105.471	32.004171737	-103.807157063
1,800.00	0.00	0.000	1,800.00	0.00	0.00	365,641.800	663,105.471	32.004171737	-103.807157063
1,900.00	0.00	0.000	1,900.00	0.00	0.00	365,641.800	663,105.471	32.004171737	-103.807157063
2,000.00	0.00	0.000	2,000.00	0.00	0.00	365,641.800	663,105.471	32.004171737	-103.807157063
KOP Begin 1°/100' build									
2,100.00	1.00	45.000	2,099.99	0.62	0.62	365,642.417	663,106.088	32.004173425	-103.807155063
2,200.00	2.00	45.000	2,199.96	2.47	2.47	365,644.268	663,107.939	32.004178488	-103.807149063
2,300.00	3.00	45.000	2,299.86	5.55	5.55	365,647.352	663,111.023	32.004186926	-103.807139065
Begin 3.00° tangent									
2,400.00	3.00	45.000	2,399.73	9.25	9.25	365,651.053	663,114.724	32.004197049	-103.807127069
2,500.00	3.00	45.000	2,499.59	12.95	12.95	365,654.753	663,118.424	32.004207173	-103.807115073
2,600.00	3.00	45.000	2,599.45	16.65	16.65	365,658.454	663,122.125	32.004217297	-103.807103076
2,700.00	3.00	45.000	2,699.31	20.36	20.36	365,662.155	663,125.826	32.004227420	-103.807091080
2,800.00	3.00	45.000	2,799.18	24.06	24.06	365,665.855	663,129.526	32.004237544	-103.807079084
2,900.00	3.00	45.000	2,899.04	27.76	27.76	365,669.556	663,133.227	32.004247667	-103.807067088
3,000.00	3.00	45.000	2,998.90	31.46	31.46	365,673.257	663,136.928	32.004257791	-103.807055092
3,100.00	3.00	45.000	3,098.77	35.16	35.16	365,676.958	663,140.628	32.004267915	-103.807043096
3,200.00	3.00	45.000	3,198.63	38.86	38.86	365,680.658	663,144.329	32.004278038	-103.807031100
Begin 1°/100' drop									
3,300.00	2.00	45.000	3,298.53	41.94	41.94	365,683.743	663,147.413	32.004286476	-103.807021102
3,400.00	1.00	45.000	3,398.50	43.79	43.79	365,685.594	663,149.264	32.004291539	-103.807015102
3,500.00	0.00	45.000	3,498.49	44.41	44.41	365,686.211	663,149.881	32.004293227	-103.807013101
Begin vertical hold @ 3198.90 TVD									
3,584.85	0.00	45.000	3,583.34	44.41	44.41	365,686.211	663,149.881	32.004293227	-103.807013101
BASE SALT									
3,600.00	0.00	45.000	3,598.49	44.41	44.41	365,686.211	663,149.881	32.004293227	-103.807013101
3,700.00	0.00	45.000	3,698.49	44.41	44.41	365,686.211	663,149.881	32.004293227	-103.807013101
3,784.85	0.00	45.000	3,783.34	44.41	44.41	365,686.211	663,149.881	32.004293227	-103.807013101
LAMAR									
3,800.00	0.00	45.000	3,798.49	44.41	44.41	365,686.211	663,149.881	32.004293227	-103.807013101

FLAT CREEK
RESOURCES

Planning Report - Geographic

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Company:	Flat Creek Resources, LLC	TVD Reference:	RKB=3129+25 @ 3154.00ft
Project:	Eddy County, New Mexico NAD27 NME	MD Reference:	RKB=3129+25 @ 3154.00ft
Site:	Phantom Bank 31 Fed Com	North Reference:	Grid
Well:	Phantom Bank 31 Fed Com No. 511H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev2		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
3,821.85	0.00	45.000	3,820.34	44.41	44.41	365,686.211	663,149.881	32.004293227	-103.807013101
BELL CANYON									
3,900.00	0.00	45.000	3,898.49	44.41	44.41	365,686.211	663,149.881	32.004293227	-103.807013101
4,000.00	0.00	45.000	3,998.49	44.41	44.41	365,686.211	663,149.881	32.004293227	-103.807013101
4,100.00	0.00	45.000	4,098.49	44.41	44.41	365,686.211	663,149.881	32.004293227	-103.807013101
4,200.00	0.00	45.000	4,198.49	44.41	44.41	365,686.211	663,149.881	32.004293227	-103.807013101
4,300.00	0.00	45.000	4,298.49	44.41	44.41	365,686.211	663,149.881	32.004293227	-103.807013101
4,400.00	0.00	45.000	4,398.49	44.41	44.41	365,686.211	663,149.881	32.004293227	-103.807013101
4,500.00	0.00	45.000	4,498.49	44.41	44.41	365,686.211	663,149.881	32.004293227	-103.807013101
4,600.00	0.00	45.000	4,598.49	44.41	44.41	365,686.211	663,149.881	32.004293227	-103.807013101
4,700.00	0.00	45.000	4,698.49	44.41	44.41	365,686.211	663,149.881	32.004293227	-103.807013101
4,744.85	0.00	45.000	4,743.34	44.41	44.41	365,686.211	663,149.881	32.004293227	-103.807013101
CHERRY CANYON									
4,800.00	0.00	45.000	4,798.49	44.41	44.41	365,686.211	663,149.881	32.004293227	-103.807013101
4,900.00	0.00	45.000	4,898.49	44.41	44.41	365,686.211	663,149.881	32.004293227	-103.807013101
5,001.51	0.00	0.000	5,000.00	44.41	44.41	365,686.211	663,149.881	32.004293227	-103.807013101
Begin 2°/100' build									
5,100.00	1.97	294.239	5,098.47	45.11	42.87	365,686.906	663,148.338	32.004295158	-103.807018070
5,200.00	3.97	294.239	5,198.33	47.23	38.14	365,689.033	663,143.614	32.004301069	-103.807033276
5,272.23	5.41	294.239	5,270.32	49.66	32.76	365,691.458	663,138.226	32.004307809	-103.807050617
Begin 5.41° tangent									
5,300.00	5.41	294.239	5,297.97	50.73	30.37	365,692.534	663,135.837	32.004310798	-103.807058308
5,400.00	5.41	294.239	5,397.52	54.61	21.76	365,696.408	663,127.233	32.004321562	-103.807086003
5,500.00	5.41	294.239	5,497.07	58.48	13.16	365,700.282	663,118.629	32.004332327	-103.807113698
5,600.00	5.41	294.239	5,596.63	62.36	4.55	365,704.156	663,110.025	32.004343091	-103.807141393
5,700.00	5.41	294.239	5,696.18	66.23	-4.05	365,708.030	663,101.421	32.004353855	-103.807169087
5,800.00	5.41	294.239	5,795.74	70.10	-12.65	365,711.903	663,092.817	32.004364620	-103.807196782
5,900.00	5.41	294.239	5,895.29	73.98	-21.26	365,715.777	663,084.213	32.004375384	-103.807224477
6,000.00	5.41	294.239	5,994.84	77.85	-29.86	365,719.651	663,075.609	32.004386148	-103.807252172
6,091.10	5.41	294.239	6,085.54	81.38	-37.70	365,723.180	663,067.770	32.004395955	-103.807277402
BRUSHY CANYON									
6,100.00	5.41	294.239	6,094.40	81.73	-38.47	365,723.525	663,067.004	32.004396913	-103.807279867
6,200.00	5.41	294.239	6,193.95	85.60	-47.07	365,727.399	663,058.400	32.004407677	-103.807307562
6,300.00	5.41	294.239	6,293.50	89.47	-55.67	365,731.273	663,049.796	32.004418441	-103.807335256
6,400.00	5.41	294.239	6,393.06	93.35	-64.28	365,735.147	663,041.192	32.004429206	-103.807362951
6,500.00	5.41	294.239	6,492.61	97.22	-72.88	365,739.021	663,032.588	32.004439970	-103.807390646
6,600.00	5.41	294.239	6,592.17	101.10	-81.49	365,742.894	663,023.984	32.004450734	-103.807418341
6,700.00	5.41	294.239	6,691.72	104.97	-90.09	365,746.768	663,015.380	32.004461498	-103.807446036
6,800.00	5.41	294.239	6,791.27	108.84	-98.69	365,750.642	663,006.776	32.004472263	-103.807473731
6,900.00	5.41	294.239	6,890.83	112.72	-107.30	365,754.516	662,998.172	32.004483027	-103.807501426
7,000.00	5.41	294.239	6,990.38	116.59	-115.90	365,758.390	662,989.568	32.004493791	-103.807529121
7,100.00	5.41	294.239	7,089.93	120.46	-124.51	365,762.264	662,980.964	32.004504555	-103.807556815
7,200.00	5.41	294.239	7,189.49	124.34	-133.11	365,766.138	662,972.360	32.004515320	-103.807584510
7,240.37	5.41	294.239	7,229.68	125.90	-136.58	365,767.702	662,968.886	32.004519665	-103.807595691
Begin 2°/100' drop									
7,300.00	4.22	294.239	7,289.10	127.96	-141.15	365,769.758	662,964.319	32.004525379	-103.807610391
7,400.00	2.22	294.239	7,388.93	130.27	-146.28	365,772.065	662,959.195	32.004531790	-103.807626886
7,500.00	0.22	294.239	7,488.91	131.14	-148.22	365,772.941	662,957.251	32.004534222	-103.807633144
7,511.09	0.00	0.000	7,500.00	131.15	-148.24	365,772.949	662,957.231	32.004534247	-103.807633207
Begin vertical hold @ 7500.00 TVD									
7,600.00	0.00	0.000	7,588.91	131.15	-148.24	365,772.949	662,957.231	32.004534247	-103.807633207
7,700.00	0.00	0.000	7,688.91	131.15	-148.24	365,772.949	662,957.231	32.004534247	-103.807633207
7,726.24	0.00	0.000	7,715.15	131.15	-148.24	365,772.949	662,957.231	32.004534247	-103.807633207
BONE SPRING LIME									

FLAT CREEK
RESOURCES

Planning Report - Geographic

Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well Phantom Bank 31 Fed Com No. 511H
Company:	Flat Creek Resources, LLC	TVD Reference:	RKB=3129+25 @ 3154.00ft
Project:	Eddy County, New Mexico NAD27 NME	MD Reference:	RKB=3129+25 @ 3154.00ft
Site:	Phantom Bank 31 Fed Com	North Reference:	Grid
Well:	Phantom Bank 31 Fed Com No. 511H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev2		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
7,800.00	0.00	0.000	7,788.91	131.15	-148.24	365,772.949	662,957.231	32.004534247	-103.807633207
7,859.24	0.00	0.000	7,848.15	131.15	-148.24	365,772.949	662,957.231	32.004534247	-103.807633207
UPPER AVALON SHALE									
7,900.00	0.00	0.000	7,888.91	131.15	-148.24	365,772.949	662,957.231	32.004534247	-103.807633207
8,000.00	0.00	0.000	7,988.91	131.15	-148.24	365,772.949	662,957.231	32.004534247	-103.807633207
8,100.00	0.00	0.000	8,088.91	131.15	-148.24	365,772.949	662,957.231	32.004534247	-103.807633207
8,200.00	0.00	0.000	8,188.91	131.15	-148.24	365,772.949	662,957.231	32.004534247	-103.807633207
8,300.00	0.00	0.000	8,288.91	131.15	-148.24	365,772.949	662,957.231	32.004534247	-103.807633207
8,328.24	0.00	0.000	8,317.15	131.15	-148.24	365,772.949	662,957.231	32.004534247	-103.807633207
LOWER AVALON SHALE									
8,400.00	0.00	0.000	8,388.91	131.15	-148.24	365,772.949	662,957.231	32.004534247	-103.807633207
8,500.00	0.00	0.000	8,488.91	131.15	-148.24	365,772.949	662,957.231	32.004534247	-103.807633207
8,600.00	0.00	0.000	8,588.91	131.15	-148.24	365,772.949	662,957.231	32.004534247	-103.807633207
8,690.24	0.00	0.000	8,679.15	131.15	-148.24	365,772.949	662,957.231	32.004534247	-103.807633207
1ST BONE SPRING SAND									
8,700.00	0.00	0.000	8,688.91	131.15	-148.24	365,772.949	662,957.231	32.004534247	-103.807633207
8,800.00	0.00	0.000	8,788.91	131.15	-148.24	365,772.949	662,957.231	32.004534247	-103.807633207
8,900.00	0.00	0.000	8,888.91	131.15	-148.24	365,772.949	662,957.231	32.004534247	-103.807633207
8,998.24	0.00	0.000	8,987.15	131.15	-148.24	365,772.949	662,957.231	32.004534247	-103.807633207
2ND BONE SPRING SHALE									
9,000.00	0.00	0.000	8,988.91	131.15	-148.24	365,772.949	662,957.231	32.004534247	-103.807633207
9,100.00	0.00	0.000	9,088.91	131.15	-148.24	365,772.949	662,957.231	32.004534247	-103.807633207
9,200.00	0.00	0.000	9,188.91	131.15	-148.24	365,772.949	662,957.231	32.004534247	-103.807633207
9,300.00	0.00	0.000	9,288.91	131.15	-148.24	365,772.949	662,957.231	32.004534247	-103.807633207
9,331.24	0.00	0.000	9,320.15	131.15	-148.24	365,772.949	662,957.231	32.004534247	-103.807633207
2ND BONE SPRING SAND									
9,400.00	0.00	0.000	9,388.91	131.15	-148.24	365,772.949	662,957.231	32.004534247	-103.807633207
9,500.00	0.00	0.000	9,488.91	131.15	-148.24	365,772.949	662,957.231	32.004534247	-103.807633207
9,600.00	0.00	0.000	9,588.91	131.15	-148.24	365,772.949	662,957.231	32.004534247	-103.807633207
9,700.00	0.00	0.000	9,688.91	131.15	-148.24	365,772.949	662,957.231	32.004534247	-103.807633207
9,800.00	0.00	0.000	9,788.91	131.15	-148.24	365,772.949	662,957.231	32.004534247	-103.807633207
9,828.24	0.00	0.000	9,817.15	131.15	-148.24	365,772.949	662,957.231	32.004534247	-103.807633207
3RD BONE SPRING SHALE									
9,900.00	0.00	0.000	9,888.91	131.15	-148.24	365,772.949	662,957.231	32.004534247	-103.807633207
10,000.00	0.00	0.000	9,988.91	131.15	-148.24	365,772.949	662,957.231	32.004534247	-103.807633207
10,100.00	0.00	0.000	10,088.91	131.15	-148.24	365,772.949	662,957.231	32.004534247	-103.807633207
10,200.00	0.00	0.000	10,188.91	131.15	-148.24	365,772.949	662,957.231	32.004534247	-103.807633207
10,300.00	0.00	0.000	10,288.91	131.15	-148.24	365,772.949	662,957.231	32.004534247	-103.807633207
10,400.00	0.00	0.000	10,388.91	131.15	-148.24	365,772.949	662,957.231	32.004534247	-103.807633207
10,500.00	0.00	0.000	10,488.91	131.15	-148.24	365,772.949	662,957.231	32.004534247	-103.807633207
10,600.00	0.00	0.000	10,588.91	131.15	-148.24	365,772.949	662,957.231	32.004534247	-103.807633207
10,636.24	0.00	0.000	10,625.15	131.15	-148.24	365,772.949	662,957.231	32.004534247	-103.807633207
3RD BONE SPRING SAND									
10,700.00	0.00	0.000	10,688.91	131.15	-148.24	365,772.949	662,957.231	32.004534247	-103.807633207
10,800.00	0.00	0.000	10,788.91	131.15	-148.24	365,772.949	662,957.231	32.004534247	-103.807633207
10,900.00	0.00	0.000	10,888.91	131.15	-148.24	365,772.949	662,957.231	32.004534247	-103.807633207
11,000.00	0.00	0.000	10,988.91	131.15	-148.24	365,772.949	662,957.231	32.004534247	-103.807633207
11,003.24	0.00	0.000	10,992.15	131.15	-148.24	365,772.949	662,957.231	32.004534247	-103.807633207
WOLFCAMP X/Y									
11,100.00	0.00	0.000	11,088.91	131.15	-148.24	365,772.949	662,957.231	32.004534247	-103.807633207
11,173.24	0.00	0.000	11,162.15	131.15	-148.24	365,772.949	662,957.231	32.004534247	-103.807633207
WOLFCAMP A									
11,200.00	0.00	0.000	11,188.91	131.15	-148.24	365,772.949	662,957.231	32.004534247	-103.807633207

FLAT CREEK
RESOURCES

Planning Report - Geographic

Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well Phantom Bank 31 Fed Com No. 511H
Company:	Flat Creek Resources, LLC	TVD Reference:	RKB=3129+25 @ 3154.00ft
Project:	Eddy County, New Mexico NAD27 NME	MD Reference:	RKB=3129+25 @ 3154.00ft
Site:	Phantom Bank 31 Fed Com	North Reference:	Grid
Well:	Phantom Bank 31 Fed Com No. 511H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev2		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
11,300.00	0.00	0.000	11,288.91	131.15	-148.24	365,772.949	662,957.231	32.004534247	-103.807633207
11,400.00	0.00	0.000	11,388.91	131.15	-148.24	365,772.949	662,957.231	32.004534247	-103.807633207
11,489.09	0.00	0.000	11,478.00	131.15	-148.24	365,772.949	662,957.231	32.004534247	-103.807633207
Begin 10°/100' build									
11,500.00	1.09	276.200	11,488.90	131.16	-148.34	365,772.961	662,957.128	32.004534279	-103.807633540
11,550.00	6.09	276.200	11,538.79	131.50	-151.46	365,773.299	662,954.016	32.004535250	-103.807643574
11,600.00	11.09	276.200	11,588.21	132.31	-158.88	365,774.105	662,946.593	32.004537566	-103.807667505
11,617.52	12.84	276.200	11,605.35	132.70	-162.49	365,774.497	662,942.982	32.004538693	-103.807679150
WOLFCAMP B									
11,650.00	16.09	276.200	11,636.80	133.57	-170.55	365,775.373	662,934.917	32.004541209	-103.807705153
11,700.00	21.09	276.200	11,684.17	135.30	-186.40	365,777.094	662,919.075	32.004546152	-103.807756230
11,750.00	26.09	276.200	11,729.98	137.46	-206.28	365,779.255	662,899.188	32.004552356	-103.807820348
11,800.00	31.09	276.200	11,773.87	140.04	-230.06	365,781.838	662,875.408	32.004559775	-103.807897018
11,831.75	34.27	276.200	11,800.59	141.89	-247.10	365,783.689	662,858.368	32.004565092	-103.807951960
WOLFCAMP C									
11,850.00	36.09	276.200	11,815.51	143.03	-257.55	365,784.825	662,847.916	32.004568353	-103.807985658
11,900.00	41.09	276.200	11,854.58	146.39	-288.55	365,788.192	662,816.921	32.004578023	-103.808085592
11,950.00	46.09	276.200	11,890.78	150.11	-322.81	365,791.914	662,782.659	32.004588712	-103.808196060
12,000.00	51.09	276.200	11,923.84	154.16	-360.08	365,795.963	662,745.390	32.004600340	-103.808316222
12,050.00	56.09	276.200	11,953.51	158.51	-400.07	365,800.307	662,705.398	32.004612817	-103.808445162
12,081.23	59.21	276.200	11,970.22	161.36	-426.30	365,803.156	662,679.174	32.004620998	-103.808529713
WOLFCAMP D									
12,089.09	60.00	276.200	11,974.20	162.09	-433.04	365,803.889	662,672.428	32.004623103	-103.808551464
Begin 10°/100' build/turn									
12,100.00	61.06	275.909	11,979.56	163.09	-442.48	365,804.890	662,662.987	32.004625981	-103.808581905
12,150.00	65.93	274.645	12,001.87	167.19	-487.03	365,808.994	662,618.445	32.004637855	-103.808725527
12,200.00	70.81	273.474	12,020.29	170.48	-533.37	365,812.275	662,572.097	32.004647493	-103.808874990
12,250.00	75.70	272.370	12,034.69	172.91	-581.18	365,814.708	662,524.294	32.004654821	-103.809029157
12,300.00	80.59	271.313	12,044.96	174.48	-630.07	365,816.276	662,475.402	32.004659783	-103.809186855
12,350.00	85.49	270.286	12,051.02	175.17	-679.68	365,816.967	662,425.791	32.004662342	-103.809346883
12,404.66	90.84	269.179	12,052.78	174.91	-734.29	365,816.711	662,371.182	32.004662367	-103.809523051
Begin 90.84° lateral									
12,500.00	90.84	269.179	12,051.38	173.55	-829.61	365,815.345	662,275.861	32.004659880	-103.809830567
12,600.00	90.84	269.179	12,049.92	172.11	-929.59	365,813.912	662,175.882	32.004657272	-103.810153110
12,700.00	90.84	269.179	12,048.46	170.68	-1,029.57	365,812.479	662,075.903	32.004654662	-103.810475653
12,800.00	90.84	269.179	12,046.99	169.25	-1,129.55	365,811.046	661,975.924	32.004652052	-103.810798196
12,900.00	90.84	269.179	12,045.53	167.81	-1,229.53	365,809.613	661,875.946	32.004649441	-103.811120739
13,000.00	90.84	269.179	12,044.07	166.38	-1,329.51	365,808.180	661,775.967	32.004646829	-103.811443282
13,100.00	90.84	269.179	12,042.60	164.95	-1,429.49	365,806.747	661,675.988	32.004644216	-103.811765825
13,200.00	90.84	269.179	12,041.14	163.51	-1,529.46	365,805.314	661,576.009	32.004641602	-103.812088368
13,300.00	90.84	269.179	12,039.68	162.08	-1,629.44	365,803.881	661,476.030	32.004638988	-103.812410911
13,400.00	90.84	269.179	12,038.22	160.65	-1,729.42	365,802.448	661,376.052	32.004636373	-103.812733454
13,500.00	90.84	269.179	12,036.75	159.22	-1,829.40	365,801.015	661,276.073	32.004633756	-103.813055997
13,600.00	90.84	269.179	12,035.29	157.78	-1,929.38	365,799.582	661,176.094	32.004631140	-103.813378540
13,700.00	90.84	269.179	12,033.83	156.35	-2,029.36	365,798.149	661,076.115	32.004628522	-103.813701083
13,800.00	90.84	269.179	12,032.36	154.92	-2,129.34	365,796.716	660,976.136	32.004625903	-103.814023626
13,900.00	90.84	269.179	12,030.90	153.48	-2,229.32	365,795.283	660,876.157	32.004623284	-103.814346169
14,000.00	90.84	269.179	12,029.44	152.05	-2,329.30	365,793.850	660,776.179	32.004620664	-103.814668712
14,100.00	90.84	269.179	12,027.98	150.62	-2,429.28	365,792.417	660,676.200	32.004618043	-103.814991255
14,200.00	90.84	269.179	12,026.51	149.18	-2,529.25	365,790.984	660,576.221	32.004615421	-103.815313798
14,300.00	90.84	269.179	12,025.05	147.75	-2,629.23	365,789.551	660,476.242	32.004612798	-103.815636341
14,400.00	90.84	269.179	12,023.59	146.32	-2,729.21	365,788.118	660,376.263	32.004610175	-103.815958884
14,500.00	90.84	269.179	12,022.12	144.89	-2,829.19	365,786.685	660,276.284	32.004607551	-103.816281427
14,600.00	90.84	269.179	12,020.66	143.45	-2,929.17	365,785.252	660,176.306	32.004604925	-103.816603970

FLAT CREEK
RESOURCES

Planning Report - Geographic

Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well Phantom Bank 31 Fed Com No. 511H
Company:	Flat Creek Resources, LLC	TVD Reference:	RKB=3129+25 @ 3154.00ft
Project:	Eddy County, New Mexico NAD27 NME	MD Reference:	RKB=3129+25 @ 3154.00ft
Site:	Phantom Bank 31 Fed Com	North Reference:	Grid
Well:	Phantom Bank 31 Fed Com No. 511H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev2		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
14,700.00	90.84	269.179	12,019.20	142.02	-3,029.15	365,783.819	660,076.327	32.004602300	-103.816926513	
14,800.00	90.84	269.179	12,017.74	140.59	-3,129.13	365,782.386	659,976.348	32.004599673	-103.817249056	
14,900.00	90.84	269.179	12,016.27	139.15	-3,229.11	365,780.953	659,876.369	32.004597045	-103.817571599	
15,000.00	90.84	269.179	12,014.81	137.72	-3,329.09	365,779.520	659,776.390	32.004594417	-103.817894142	
15,100.00	90.84	269.179	12,013.35	136.29	-3,429.07	365,778.088	659,676.411	32.004591788	-103.818216685	
15,200.00	90.84	269.179	12,011.88	134.86	-3,529.05	365,776.655	659,576.433	32.004589158	-103.818539228	
15,300.00	90.84	269.179	12,010.42	133.42	-3,629.02	365,775.222	659,476.454	32.004586527	-103.818861771	
15,400.00	90.84	269.179	12,008.96	131.99	-3,729.00	365,773.789	659,376.475	32.004583895	-103.819184314	
15,500.00	90.84	269.179	12,007.50	130.56	-3,828.98	365,772.356	659,276.496	32.004581263	-103.819506856	
15,600.00	90.84	269.179	12,006.03	129.12	-3,928.96	365,770.923	659,176.517	32.004578629	-103.819829399	
15,700.00	90.84	269.179	12,004.57	127.69	-4,028.94	365,769.490	659,076.539	32.004575995	-103.820151942	
15,800.00	90.84	269.179	12,003.11	126.26	-4,128.92	365,768.057	658,976.560	32.004573360	-103.820474485	
15,900.00	90.84	269.179	12,001.64	124.82	-4,228.90	365,766.624	658,876.581	32.004570725	-103.820797028	
16,000.00	90.84	269.179	12,000.18	123.39	-4,328.88	365,765.191	658,776.602	32.004568088	-103.821119571	
16,100.00	90.84	269.179	11,998.72	121.96	-4,428.86	365,763.758	658,676.623	32.004565451	-103.821442114	
16,200.00	90.84	269.179	11,997.26	120.53	-4,528.84	365,762.325	658,576.644	32.004562812	-103.821764657	
16,300.00	90.84	269.179	11,995.79	119.09	-4,628.81	365,760.892	658,476.666	32.004560173	-103.822087199	
16,400.00	90.84	269.179	11,994.33	117.66	-4,728.79	365,759.459	658,376.687	32.004557533	-103.822409742	
16,500.00	90.84	269.179	11,992.87	116.23	-4,828.77	365,758.026	658,276.708	32.004554893	-103.822732285	
16,600.00	90.84	269.179	11,991.41	114.79	-4,928.75	365,756.593	658,176.729	32.004552251	-103.823054828	
16,700.00	90.84	269.179	11,989.94	113.36	-5,028.73	365,755.160	658,076.750	32.004549609	-103.823377371	
16,800.00	90.84	269.179	11,988.48	111.93	-5,128.71	365,753.727	657,976.771	32.004546966	-103.823699914	
16,900.00	90.84	269.179	11,987.02	110.49	-5,228.69	365,752.294	657,876.793	32.004544322	-103.824022456	
17,000.00	90.84	269.179	11,985.55	109.06	-5,328.67	365,750.861	657,776.814	32.004541677	-103.824344999	
17,074.07	90.84	269.179	11,984.47	108.00	-5,402.72	365,749.800	657,702.760	32.004539718	-103.824583906	
LTP @ 17074.07 MD 11984.47 TVD										
17,100.00	90.84	269.179	11,984.09	107.63	-5,428.65	365,749.428	657,676.835	32.004539031	-103.824667542	
17,174.08	90.84	269.179	11,983.01	106.57	-5,502.71	365,748.367	657,602.770	32.004537071	-103.824906483	
PBHL/TD @ 17174.46 MD 11983.01 TVD										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
Phantom 511 0 VS	0.00	0.000	12,064.00	184.97	-1.57	365,826.769	663,103.900	32.004680235	-103.807159227	
- plan misses target center by 356.78ft at 11888.33ft MD (11845.70 TVD, 145.57 N, -281.01 E)										
- Point										
Phantom 511 FTP 500 f	0.00	0.000	12,053.28	174.60	-729.57	365,816.400	662,375.900	32.004661448	-103.809507837	
- plan misses target center by 0.59ft at 12399.96ft MD (12052.83 TVD, 174.98 N, -729.59 E)										
- Point										
Phantom 511 LTP 500 F	0.00	0.000	11,984.47	108.00	-5,402.72	365,749.800	657,702.760	32.004539718	-103.824583906	
- plan hits target center										
- Point										
Phantom 511 PBHL 50C	0.00	0.000	11,983.00	106.60	-5,502.71	365,748.400	657,602.770	32.004537162	-103.824906484	
- plan misses target center by 0.03ft at 17174.08ft MD (11983.01 TVD, 106.57 N, -5502.71 E)										
- Point										

FLAT CREEK
RESOURCES

Planning Report - Geographic

Database:	DB_Decv0422v16	Local Co-ordinate Reference:	Well Phantom Bank 31 Fed Com No. 511H
Company:	Flat Creek Resources, LLC	TVD Reference:	RKB=3129+25 @ 3154.00ft
Project:	Eddy County, New Mexico NAD27 NME	MD Reference:	RKB=3129+25 @ 3154.00ft
Site:	Phantom Bank 31 Fed Com	North Reference:	Grid
Well:	Phantom Bank 31 Fed Com No. 511H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev2		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
25.00	25.00	ALLUVIUM		0.84	269.180	
879.00	879.00	RUSLTER		0.84	269.180	
1,501.00	1,501.00	TOP SALT		0.84	269.180	
3,584.85	3,583.34	BASE SALT		0.84	269.180	
3,784.85	3,783.34	LAMAR		0.84	269.180	
3,821.85	3,820.34	BELL CANYON		0.84	269.180	
4,744.85	4,743.34	CHERRY CANYON		0.84	269.180	
6,091.10	6,085.54	BRUSHY CANYON		0.84	269.180	
7,726.24	7,715.15	BONE SPRING LIME		0.84	269.180	
7,859.24	7,848.15	UPPER AVALON SHALE		0.84	269.180	
8,328.24	8,317.15	LOWER AVALON SHALE		0.84	269.180	
8,690.24	8,679.15	1ST BONE SPRING SAND		0.84	269.180	
8,998.24	8,987.15	2ND BONE SPRING SHALE		0.84	269.180	
9,331.24	9,320.15	2ND BONE SPRING SAND		0.84	269.180	
9,828.24	9,817.15	3RD BONE SPRING SHALE		0.84	269.180	
10,636.24	10,625.15	3RD BONE SPRING SAND		0.84	269.180	
11,003.24	10,992.15	WOLFCAMP X/Y		0.84	269.180	
11,173.24	11,162.15	WOLFCAMP A		0.84	269.180	
11,617.52	11,605.35	WOLFCAMP B		0.84	269.180	
11,831.75	11,800.59	WOLFCAMP C		0.84	269.180	
12,081.23	11,970.22	WOLFCAMP D		0.84	269.180	

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
2,000.00	2,000.00	0.00	0.00	KOP Begin 1°/100' build	
2,300.00	2,299.86	5.55	5.55	Begin 3.00° tangent	
3,200.00	3,198.63	38.86	38.86	Begin 1°/100' drop	
3,500.00	3,498.49	44.41	44.41	Begin vertical hold @ 3198.90 TVD	
5,001.51	5,000.00	44.41	44.41	Begin 2°/100' build	
5,272.23	5,270.32	49.66	32.76	Begin 5.41° tangent	
7,240.37	7,229.68	125.90	-136.58	Begin 2°/100' drop	
7,511.09	7,500.00	131.15	-148.24	Begin vertical hold @ 7500.00 TVD	
11,489.09	11,478.00	131.15	-148.24	Begin 10°/100' build	
12,089.09	11,974.20	162.09	-433.04	Begin 10°/100' build/turn	
12,404.66	12,052.78	174.91	-734.29	Begin 90.84° lateral	
17,074.07	11,984.47	108.00	-5,402.72	LTP @ 17074.07 MD 11984.47 TVD	
17,174.08	11,983.01	106.57	-5,502.71	PBHL/TD @ 17174.46 MD 11983.01 TVD	

FLAT CREEK
RESOURCES

Anticollision Report

Company:	Flat Creek Resources, LLC	Local Co-ordinate Reference:	Well Phantom Bank 31 Fed Com No. 511H
Project:	Eddy County, New Mexico NAD27 NME	TVD Reference:	RKB=3129+25 @ 3154.00ft
Reference Site:	Phantom Bank 31 Fed Com	MD Reference:	RKB=3129+25 @ 3154.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Phantom Bank 31 Fed Com No. 511H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev2	Offset TVD Reference:	Offset Datum

Reference	rev2		
Filter type:	GLOBAL FILTER APPLIED: All wellpaths within 200'+ 100/1000 of reference		
Interpolation Method:	MD Interval 100.00ft	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum centre distance of 1,917.51ft	Error Surface:	Pedal Curve
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program		Date	6/28/2023		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.00	17,174.08	rev2 (Original Hole)	MWD	OWSG MWD - Standard	

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						
Phantom Bank 31 Fed Com						
Phantom Bank 31 Fed Com No. 101H - Original Hole - re	7,587.89	7,585.17	175.78	146.79	6.063	CC, ES
Phantom Bank 31 Fed Com No. 101H - Original Hole - re	7,700.00	7,691.54	177.21	147.94	6.054	SF
Phantom Bank 31 Fed Com No. 201H - Original Hole - re	8,249.64	8,260.89	59.03	31.62	2.153	CC, ES, SF
Phantom Bank 31 Fed Com No. 501H - Original Hole - S	1,127.88	1,129.61	100.02	92.19	12.782	CC
Phantom Bank 31 Fed Com No. 501H - Original Hole - S	1,200.00	1,201.26	100.21	92.06	12.298	ES
Phantom Bank 31 Fed Com No. 501H - Original Hole - S	2,200.00	2,201.25	110.17	98.66	9.569	SF
Phantom Bank 31 Fed Com No. 502H - Original Hole - S	2,981.72	2,984.62	41.73	23.06	2.235	CC
Phantom Bank 31 Fed Com No. 502H - Original Hole - S	3,609.95	3,612.23	43.70	22.18	2.031	ES
Phantom Bank 31 Fed Com No. 502H - Original Hole - S	3,700.00	3,701.92	44.16	22.37	2.027	SF
Phantom Bank 31 Fed Com No. 504H - Original Hole - S	9,634.56	9,617.71	862.58	821.75	21.125	CC
Phantom Bank 31 Fed Com No. 504H - Original Hole - S	9,700.00	9,680.95	862.66	821.69	21.054	ES
Phantom Bank 31 Fed Com No. 504H - Original Hole - S	17,175.07	16,203.82	1,301.81	1,119.50	7.141	SF
Phantom Bank 31 Fed Com No. 506H - Original Hole - S	3,648.94	3,655.63	101.34	81.52	5.112	CC, ES
Phantom Bank 31 Fed Com No. 506H - Original Hole - S	10,918.33	10,946.67	174.40	131.42	4.058	SF
Phantom Bank 31 Fed Com No. 508H - Original Hole - S	1,362.07	1,348.28	931.24	917.34	66.979	CC
Phantom Bank 31 Fed Com No. 508H - Original Hole - S	1,400.00	1,381.23	931.34	917.22	65.977	ES
Phantom Bank 31 Fed Com No. 508H - Original Hole - S	17,175.07	16,605.00	1,448.73	1,201.62	5.863	SF
Phantom Bank 31 Fed Com No. 561H - Original Hole - re	2,000.00	2,000.00	30.04	19.04	2.729	CC, ES
Phantom Bank 31 Fed Com No. 561H - Original Hole - re	17,175.07	16,948.00	557.78	312.96	2.278	SF
Phantom Bank 31 Fed Com No. 701H - Original Hole - S	0.00	1.50	121.49			
Phantom Bank 31 Fed Com No. 701H - Original Hole - S	400.00	400.38	122.75	118.00	25.840	ES
Phantom Bank 31 Fed Com No. 701H - Original Hole - S	10,100.00	10,087.37	183.61	142.97	4.517	SF
Phantom Bank 31 Fed Com No. 702H - Original Hole - S	7,203.21	7,196.02	103.98	76.62	3.800	CC, ES
Phantom Bank 31 Fed Com No. 702H - Original Hole - S	7,300.00	7,293.02	104.40	76.71	3.770	SF
Phantom Bank 31 Fed Com No. 703H - Original Hole - S	2,122.07	2,125.00	79.37	67.28	6.564	CC, ES
Phantom Bank 31 Fed Com No. 703H - Original Hole - S	2,200.00	2,202.53	79.96	67.61	6.472	SF
Phantom Bank 31 Fed Com No. 707H - Original Hole - re	2,000.00	1,992.00	853.91	842.91	77.654	CC, ES
Phantom Bank 31 Fed Com No. 707H - Original Hole - re	17,175.07	15,996.61	1,361.75	1,170.96	7.137	SF
Phantom Bank 31 Fed Com No. 708H - Original Hole - re	6,572.59	6,583.13	926.99	902.75	38.246	CC
Phantom Bank 31 Fed Com No. 708H - Original Hole - re	17,175.07	17,131.85	937.91	676.00	3.581	ES, SF
Phantom Bank 31 Fed Com No. 709H - Original Hole - re	2,000.00	1,985.00	957.59	946.60	87.169	CC, ES
Phantom Bank 31 Fed Com No. 709H - Original Hole - re	17,175.07	17,151.95	1,327.80	1,065.58	5.064	SF

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



FLAT CREEK
RESOURCES

Anticollision Report

Company:	Flat Creek Resources, LLC	Local Co-ordinate Reference:	Well Phantom Bank 31 Fed Com No. 511H
Project:	Eddy County, New Mexico NAD27 NME	TVD Reference:	RKB=3129+25 @ 3154.00ft
Reference Site:	Phantom Bank 31 Fed Com	MD Reference:	RKB=3129+25 @ 3154.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Phantom Bank 31 Fed Com No. 511H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev2	Offset TVD Reference:	Offset Datum

Offset Design: Phantom Bank 31 Fed Com - Phantom Bank 31 Fed Com No. 101H - Original Hole - rev0													Offset Site Error:	0.00 ft
Survey Program: 0-MWD													Offset Well Error:	0.00 ft
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 +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
0.00	0.00	1.50	1.50	0.00	0.01	-31.71	160.76	-99.34	188.98					
100.00	100.00	101.50	101.50	0.43	0.43	-31.71	160.76	-99.34	188.98	188.12	0.86	219.782		
200.00	200.00	201.50	201.50	1.25	1.25	-31.71	160.76	-99.34	188.98	186.47	2.51	75.377		
300.00	300.00	301.50	301.50	1.75	1.75	-31.71	160.76	-99.34	188.98	185.48	3.50	54.059		
400.00	400.00	401.50	401.50	2.13	2.13	-31.71	160.76	-99.34	188.98	184.71	4.27	44.288		
500.00	500.00	501.50	501.50	2.46	2.46	-31.71	160.76	-99.34	188.98	184.06	4.92	38.378		
600.00	600.00	601.50	601.50	2.75	2.75	-31.71	160.76	-99.34	188.98	183.47	5.51	34.309		
700.00	700.00	701.50	701.50	3.02	3.02	-31.71	160.76	-99.34	188.98	182.94	6.04	31.287		
800.00	800.00	801.50	801.50	3.27	3.27	-31.71	160.76	-99.34	188.98	182.45	6.53	28.926		
900.00	900.00	901.50	901.50	3.50	3.50	-31.71	160.76	-99.34	188.98	181.98	7.00	27.015		
1,000.00	1,000.00	1,001.50	1,001.50	3.72	3.72	-31.71	160.76	-99.34	188.98	181.55	7.43	25.427		
1,100.00	1,100.00	1,101.50	1,101.50	3.92	3.92	-31.71	160.76	-99.34	188.98	181.13	7.85	24.079		
1,200.00	1,200.00	1,201.50	1,201.50	4.12	4.12	-31.71	160.76	-99.34	188.98	180.73	8.25	22.915		
1,300.00	1,300.00	1,301.50	1,301.50	4.31	4.32	-31.71	160.76	-99.34	188.98	180.35	8.63	21.898		
1,400.00	1,400.00	1,401.50	1,401.50	4.50	4.50	-31.71	160.76	-99.34	188.98	179.98	9.00	20.999		
1,500.00	1,500.00	1,501.50	1,501.50	4.68	4.68	-31.71	160.76	-99.34	188.98	179.62	9.36	20.195		
1,600.00	1,600.00	1,601.50	1,601.50	4.85	4.85	-31.71	160.76	-99.34	188.98	179.28	9.71	19.472		
1,700.00	1,700.00	1,701.50	1,701.50	5.02	5.02	-31.71	160.76	-99.34	188.98	178.94	10.04	18.817		
1,800.00	1,800.00	1,801.50	1,801.50	5.19	5.19	-31.71	160.76	-99.34	188.98	178.61	10.37	18.219		
1,900.00	1,900.00	1,901.50	1,901.50	5.35	5.35	-31.71	160.76	-99.34	188.98	178.29	10.69	17.670		
2,000.00	2,000.00	2,001.50	2,001.50	5.50	5.51	-31.71	160.76	-99.34	188.98	177.97	11.01	17.164		
2,100.00	2,099.99	2,101.49	2,101.49	5.65	5.66	-76.97	160.76	-99.34	188.78	177.47	11.31	16.691		
2,200.00	2,199.96	2,201.46	2,201.46	5.81	5.81	-77.75	160.76	-99.34	188.21	176.60	11.61	16.214		
2,300.00	2,299.86	2,301.36	2,301.36	5.98	5.96	-79.07	160.76	-99.34	187.33	175.43	11.90	15.742		
2,400.00	2,399.73	2,401.23	2,401.23	6.17	6.11	-80.64	160.76	-99.34	186.41	174.22	12.19	15.293		
2,500.00	2,499.59	2,501.09	2,501.09	6.37	6.25	-82.24	160.76	-99.34	185.63	173.15	12.47	14.882		
2,600.00	2,599.45	2,600.95	2,600.95	6.58	6.39	-83.84	160.76	-99.34	184.99	172.24	12.75	14.504		
2,700.00	2,699.31	2,700.81	2,700.81	6.80	6.53	-85.45	160.76	-99.34	184.50	171.47	13.03	14.158		
2,800.00	2,799.18	2,800.68	2,800.68	7.04	6.67	-87.07	160.76	-99.34	184.16	170.86	13.31	13.841		
2,900.00	2,899.04	2,900.54	2,900.54	7.28	6.80	-88.70	160.76	-99.34	183.97	170.39	13.58	13.550		
2,979.85	2,978.78	2,980.28	2,980.28	7.48	6.91	-90.00	160.76	-99.34	183.92	170.13	13.79	13.335		
3,000.00	2,998.90	3,000.40	3,000.40	7.53	6.94	-90.33	160.76	-99.34	183.92	170.08	13.85	13.284		
3,100.00	3,098.77	3,100.27	3,100.27	7.78	7.07	-91.96	160.76	-99.34	184.03	169.92	14.11	13.039		
3,200.00	3,198.63	3,200.13	3,200.13	8.05	7.20	-93.58	160.76	-99.34	184.28	169.90	14.38	12.815		
3,300.00	3,298.53	3,300.03	3,300.03	8.31	7.33	-94.93	160.76	-99.34	184.61	169.96	14.65	12.605		
3,400.00	3,398.50	3,400.00	3,400.00	8.55	7.46	-95.74	160.76	-99.34	184.85	169.94	14.90	12.402		
3,500.00	3,498.49	3,499.99	3,499.99	8.72	7.58	-51.01	160.76	-99.34	184.94	169.78	15.16	12.202		
3,600.00	3,598.49	3,599.99	3,599.99	8.83	7.71	-51.01	160.76	-99.34	184.94	169.54	15.40	12.007		
3,700.00	3,698.49	3,699.99	3,699.99	8.93	7.83	-51.01	160.76	-99.34	184.94	169.29	15.65	11.820		
3,800.00	3,798.49	3,799.99	3,799.99	9.04	7.96	-51.01	160.76	-99.34	184.94	169.05	15.89	11.641		
3,900.00	3,898.49	3,894.19	3,894.17	9.14	8.17	-50.86	162.07	-100.17	186.50	170.31	16.19	11.517		
4,000.00	3,998.49	3,988.19	3,988.05	9.24	8.56	-50.42	165.98	-102.66	191.18	174.52	16.66	11.478		
4,100.00	4,098.49	4,084.21	4,083.77	9.35	8.72	-49.74	172.42	-106.76	198.75	181.84	16.92	11.748		
4,200.00	4,198.49	4,183.85	4,183.04	9.45	8.86	-49.04	179.60	-111.33	206.93	189.76	17.17	12.052		
4,300.00	4,298.49	4,283.48	4,282.31	9.55	9.02	-48.39	186.78	-115.90	215.13	197.69	17.45	12.332		
4,400.00	4,398.49	4,383.12	4,381.58	9.65	9.20	-47.79	193.96	-120.47	223.36	205.63	17.73	12.595		
4,500.00	4,498.49	4,482.75	4,480.85	9.75	9.39	-47.23	201.15	-125.04	231.62	213.58	18.04	12.843		
4,600.00	4,598.49	4,582.39	4,580.12	9.86	9.59	-46.71	208.33	-129.61	239.89	221.54	18.35	13.075		
4,700.00	4,698.49	4,682.02	4,679.39	9.96	9.80	-46.23	215.51	-134.18	248.18	229.51	18.67	13.293		
4,800.00	4,798.49	4,781.66	4,778.66	10.06	10.02	-45.78	222.69	-138.75	256.49	237.49	19.00	13.498		
4,900.00	4,898.49	4,881.29	4,877.93	10.16	10.26	-45.35	229.87	-143.32	264.81	245.47	19.34	13.690		
5,000.00	4,998.49	4,980.92	4,977.20	10.26	10.50	-44.95	237.05	-147.90	273.15	253.45	19.70	13.869		

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



FLAT CREEK
RESOURCES

Anticollision Report

Company:	Flat Creek Resources, LLC	Local Co-ordinate Reference:	Well Phantom Bank 31 Fed Com No. 511H
Project:	Eddy County, New Mexico NAD27 NME	TVD Reference:	RKB=3129+25 @ 3154.00ft
Reference Site:	Phantom Bank 31 Fed Com	MD Reference:	RKB=3129+25 @ 3154.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Phantom Bank 31 Fed Com No. 511H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev2	Offset TVD Reference:	Offset Datum

Offset Design: Phantom Bank 31 Fed Com - Phantom Bank 31 Fed Com No. 101H - Original Hole - rev0													Offset Site Error: 0.00 ft
Survey Program: 0-MWD													Offset Well Error: 0.00 ft
Reference	Offset	Semi Major Axis	Highside	Rule Assigned:				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)	Separation Factor	
5,100.00	5,098.47	5,080.66	5,076.58	10.51	10.75	21.26	244.24	-152.47	279.92	259.83	20.09	13.932	
5,200.00	5,198.33	5,180.53	5,176.08	10.82	11.01	21.98	251.43	-157.05	283.48	262.77	20.71	13.688	
5,300.00	5,297.97	5,280.40	5,275.59	10.84	11.27	22.95	258.63	-161.63	284.00	262.86	21.14	13.433	
5,400.00	5,397.52	5,380.27	5,375.09	10.89	11.54	24.00	265.83	-166.21	283.76	262.23	21.54	13.177	
5,500.00	5,497.07	5,480.13	5,474.59	10.96	11.82	25.05	273.03	-170.79	283.62	261.66	21.96	12.914	
5,594.58	5,591.23	5,574.58	5,568.69	11.03	12.09	26.05	279.83	-175.13	283.58	261.20	22.39	12.667	
5,600.00	5,596.63	5,579.99	5,574.08	11.04	12.11	26.11	280.22	-175.38	283.58	261.17	22.41	12.654	
5,700.00	5,696.18	5,679.86	5,673.58	11.13	12.40	27.16	287.42	-179.96	283.64	260.76	22.88	12.397	
5,800.00	5,795.74	5,781.68	5,775.04	11.24	12.67	28.23	294.70	-184.59	283.72	260.37	23.35	12.151	
5,900.00	5,895.29	5,882.42	5,885.58	11.36	13.05	29.36	300.24	-188.11	281.35	257.42	23.94	11.755	
6,000.00	5,994.84	6,002.83	5,995.95	11.49	13.45	30.46	302.16	-189.34	275.22	250.70	24.52	11.225	
6,100.00	6,094.40	6,102.77	6,095.90	11.63	13.59	31.49	302.16	-189.34	267.13	242.26	24.87	10.743	
6,200.00	6,193.95	6,202.32	6,195.45	11.78	13.67	32.57	302.16	-189.34	259.12	233.95	25.17	10.295	
6,300.00	6,293.50	6,301.88	6,295.00	11.94	13.75	33.73	302.16	-189.34	251.20	225.73	25.48	9.859	
6,400.00	6,393.06	6,401.43	6,394.56	12.11	13.83	34.96	302.16	-189.34	243.40	217.61	25.79	9.437	
6,500.00	6,492.61	6,500.99	6,494.11	12.30	13.91	36.28	302.16	-189.34	235.72	209.61	26.11	9.029	
6,600.00	6,592.17	6,600.54	6,593.67	12.49	14.00	37.68	302.16	-189.34	228.17	201.75	26.42	8.636	
6,700.00	6,691.72	6,700.09	6,693.22	12.69	14.08	39.17	302.16	-189.34	220.76	194.03	26.73	8.258	
6,800.00	6,791.27	6,799.65	6,792.77	12.90	14.16	40.77	302.16	-189.34	213.52	186.48	27.04	7.897	
6,900.00	6,890.83	6,899.20	6,892.33	13.12	14.24	42.47	302.16	-189.34	206.45	179.12	27.33	7.553	
7,000.00	6,990.38	6,998.75	6,991.88	13.35	14.32	44.30	302.16	-189.34	199.58	171.96	27.62	7.226	
7,100.00	7,089.93	7,098.31	7,091.43	13.58	14.40	46.25	302.16	-189.34	192.92	165.03	27.89	6.918	
7,200.00	7,189.49	7,197.86	7,190.99	13.83	14.48	48.34	302.16	-189.34	186.50	158.37	28.14	6.629	
7,300.00	7,289.10	7,297.47	7,290.60	14.05	14.56	50.37	302.16	-189.34	180.75	152.41	28.34	6.379	
7,400.00	7,388.93	7,397.31	7,390.43	14.35	14.65	51.72	302.16	-189.34	177.21	148.62	28.59	6.198	
7,500.00	7,488.91	7,497.28	7,490.41	14.66	14.73	52.24	302.16	-189.34	175.90	147.03	28.86	6.094	
7,587.89	7,576.80	7,585.17	7,578.30	14.72	14.80	52.29	302.16	-189.34	175.78	146.79	28.89	6.063 CC, ES	
7,600.00	7,588.91	7,597.28	7,590.41	14.72	14.81	-13.51	302.16	-189.34	175.88	146.87	29.01	6.063	
7,700.00	7,688.91	7,697.28	7,690.41	14.80	14.95	-15.17	302.09	-194.58	177.21	147.94	29.27	6.054 SF	
7,800.00	7,788.91	7,797.28	7,790.41	14.87	15.26	-20.91	301.82	-213.45	183.67	153.86	29.81	6.162	
7,900.00	7,888.91	7,897.28	7,890.41	14.95	15.62	-28.94	301.41	-242.39	199.14	168.72	30.42	6.547	
8,000.00	7,988.91	7,997.28	7,990.41	15.02	15.97	-37.13	300.92	-276.78	227.13	196.24	30.89	7.354	
8,100.00	8,088.91	8,097.28	8,090.41	15.09	16.29	-44.49	300.38	-314.50	268.53	237.33	31.21	8.605	
8,200.00	8,188.91	8,197.28	8,190.41	15.17	16.53	-49.72	299.91	-347.35	321.76	290.43	31.33	10.270	
8,300.00	8,288.91	8,297.28	8,290.41	15.24	16.76	-54.41	299.40	-383.36	384.51	352.98	31.53	12.195	
8,400.00	8,388.91	8,397.28	8,390.41	15.32	16.91	-57.29	299.02	-409.65	454.45	422.83	31.62	14.371	
8,500.00	8,488.91	8,497.28	8,490.41	15.39	17.06	-59.81	298.64	-436.10	529.94	498.15	31.79	16.668	
8,600.00	8,588.91	8,597.28	8,590.41	15.47	17.22	-62.09	298.25	-463.74	609.69	577.65	32.04	19.027	
8,700.00	8,688.91	8,697.28	8,690.41	15.54	17.31	-63.34	298.01	-480.57	692.63	660.43	32.20	21.510	
8,800.00	8,788.91	8,797.28	8,790.41	15.61	17.47	-65.14	297.63	-507.50	778.31	745.78	32.53	23.926	
8,900.00	8,888.91	8,897.28	8,890.41	15.69	17.47	-65.14	297.63	-507.50	865.90	833.32	32.58	26.581	
9,000.00	8,988.91	8,997.28	8,990.41	15.76	17.61	-66.51	297.30	-530.57	955.03	922.10	32.92	29.006	
9,100.00	9,088.91	9,097.28	9,090.41	15.84	17.75	-67.73	296.97	-553.19	1,045.77	1,012.48	33.29	31.417	
9,200.00	9,188.91	9,197.28	9,190.41	15.91	17.75	-67.73	296.97	-553.19	1,137.36	1,103.93	33.43	34.023	
9,300.00	9,288.91	9,297.28	9,290.41	15.99	17.75	-67.73	296.97	-553.19	1,230.27	1,196.67	33.59	36.621	
9,400.00	9,388.91	9,397.28	9,390.41	16.06	17.92	-68.87	296.64	-576.38	1,323.45	1,289.44	34.01	38.912	
9,500.00	9,488.91	9,497.28	9,490.41	16.14	18.11	-69.94	296.30	-600.47	1,417.86	1,383.42	34.44	41.166	
9,600.00	9,588.91	9,597.28	9,590.41	16.21	18.11	-69.94	296.30	-600.47	1,512.30	1,477.65	34.65	43.640	
9,700.00	9,688.91	9,697.28	9,690.41	16.29	18.11	-69.94	296.30	-600.47	1,607.42	1,572.54	34.88	46.087	
9,800.00	9,788.91	9,797.28	9,790.41	16.37	18.11	-69.94	296.30	-600.47	1,703.09	1,667.98	35.11	48.502	
9,900.00	9,888.91	9,897.28	9,890.41	16.44	18.11	-69.94	296.30	-600.47	1,799.23	1,763.87	35.36	50.885	
10,000.00	9,988.91	9,997.28	9,990.41	16.52	18.28	-70.73	296.02	-619.83	1,895.32	1,859.53	35.79	52.961	

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



Anticollision Report

Company:	Flat Creek Resources, LLC	Local Co-ordinate Reference:	Well Phantom Bank 31 Fed Com No. 511H
Project:	Eddy County, New Mexico NAD27 NME	TVD Reference:	RKB=3129+25 @ 3154.00ft
Reference Site:	Phantom Bank 31 Fed Com	MD Reference:	RKB=3129+25 @ 3154.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Phantom Bank 31 Fed Com No. 511H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev2	Offset TVD Reference:	Offset Datum

FLAT CREEK
RESOURCES

Anticollision Report

Company:	Flat Creek Resources, LLC	Local Co-ordinate Reference:	Well Phantom Bank 31 Fed Com No. 511H
Project:	Eddy County, New Mexico NAD27 NME	TVD Reference:	RKB=3129+25 @ 3154.00ft
Reference Site:	Phantom Bank 31 Fed Com	MD Reference:	RKB=3129+25 @ 3154.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Phantom Bank 31 Fed Com No. 511H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev2	Offset TVD Reference:	Offset Datum

Offset Design: Phantom Bank 31 Fed Com - Phantom Bank 31 Fed Com No. 201H - Original Hole - rev0													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)			
0.00	0.00	2.50	2.50	0.00	0.01	-37.22	130.57	-99.19	163.98				
100.00	100.00	102.50	102.50	0.43	0.44	-37.22	130.57	-99.19	163.98	163.11	0.87	188.883	
200.00	200.00	202.50	202.50	1.25	1.26	-37.22	130.57	-99.19	163.98	161.46	2.51	65.274	
300.00	300.00	302.50	302.50	1.75	1.75	-37.22	130.57	-99.19	163.98	160.48	3.50	46.854	
400.00	400.00	402.50	402.50	2.13	2.14	-37.22	130.57	-99.19	163.98	159.71	4.27	38.399	
500.00	500.00	502.50	502.50	2.46	2.47	-37.22	130.57	-99.19	163.98	159.05	4.93	33.281	
600.00	600.00	602.50	602.50	2.75	2.76	-37.22	130.57	-99.19	163.98	158.47	5.51	29.755	
700.00	700.00	702.50	702.50	3.02	3.02	-37.22	130.57	-99.19	163.98	157.93	6.04	27.136	
800.00	800.00	802.50	802.50	3.27	3.27	-37.22	130.57	-99.19	163.98	157.44	6.54	25.090	
900.00	900.00	902.50	902.50	3.50	3.50	-37.22	130.57	-99.19	163.98	156.98	7.00	23.433	
1,000.00	1,000.00	1,002.50	1,002.50	3.72	3.72	-37.22	130.57	-99.19	163.98	156.54	7.43	22.056	
1,100.00	1,100.00	1,102.50	1,102.50	3.92	3.93	-37.22	130.57	-99.19	163.98	156.13	7.85	20.887	
1,200.00	1,200.00	1,202.50	1,202.50	4.12	4.13	-37.22	130.57	-99.19	163.98	155.73	8.25	19.879	
1,300.00	1,300.00	1,302.50	1,302.50	4.31	4.32	-37.22	130.57	-99.19	163.98	155.34	8.63	18.997	
1,400.00	1,400.00	1,402.50	1,402.50	4.50	4.50	-37.22	130.57	-99.19	163.98	154.98	9.00	18.217	
1,500.00	1,500.00	1,502.50	1,502.50	4.68	4.68	-37.22	130.57	-99.19	163.98	154.62	9.36	17.520	
1,600.00	1,600.00	1,602.50	1,602.50	4.85	4.85	-37.22	130.57	-99.19	163.98	154.27	9.71	16.893	
1,700.00	1,700.00	1,702.50	1,702.50	5.02	5.02	-37.22	130.57	-99.19	163.98	153.93	10.04	16.324	
1,800.00	1,800.00	1,802.50	1,802.50	5.19	5.19	-37.22	130.57	-99.19	163.98	153.60	10.37	15.806	
1,900.00	1,900.00	1,902.50	1,902.50	5.35	5.35	-37.22	130.57	-99.19	163.98	153.28	10.70	15.330	
2,000.00	2,000.00	2,002.50	2,002.50	5.50	5.51	-37.22	130.57	-99.19	163.98	152.96	11.01	14.891	
2,100.00	2,099.99	2,102.49	2,102.49	5.65	5.66	-82.53	130.57	-99.19	163.86	152.55	11.31	14.486	
2,200.00	2,199.96	2,202.46	2,202.46	5.81	5.81	-83.44	130.57	-99.19	163.54	151.93	11.61	14.088	
2,300.00	2,299.86	2,302.36	2,302.36	5.98	5.96	-84.96	130.57	-99.19	163.10	151.20	11.90	13.706	
2,400.00	2,399.73	2,402.23	2,402.23	6.17	6.11	-86.80	130.57	-99.19	162.72	150.54	12.19	13.351	
2,500.00	2,499.59	2,502.09	2,502.09	6.37	6.25	-88.64	130.57	-99.19	162.51	150.04	12.47	13.031	
2,573.91	2,573.39	2,575.89	2,575.89	6.53	6.35	-90.00	130.57	-99.19	162.47	149.79	12.68	12.813	
2,600.00	2,599.45	2,601.95	2,601.95	6.58	6.39	-90.48	130.57	-99.19	162.47	149.72	12.75	12.741	
2,700.00	2,699.31	2,701.81	2,701.81	6.80	6.53	-92.32	130.57	-99.19	162.60	149.57	13.03	12.479	
2,800.00	2,799.18	2,801.68	2,801.68	7.04	6.67	-94.16	130.57	-99.19	162.90	149.59	13.31	12.242	
2,900.00	2,899.04	2,901.54	2,901.54	7.28	6.80	-95.99	130.57	-99.19	163.36	149.78	13.58	12.028	
3,000.00	2,998.90	3,001.40	3,001.40	7.53	6.94	-97.80	130.57	-99.19	163.99	150.14	13.86	11.835	
3,100.00	3,098.77	3,101.27	3,101.27	7.78	7.07	-99.61	130.57	-99.19	164.79	150.65	14.13	11.660	
3,200.00	3,198.63	3,201.13	3,201.13	8.05	7.20	-101.39	130.57	-99.19	165.74	151.33	14.41	11.501	
3,300.00	3,298.53	3,301.03	3,301.03	8.31	7.33	-102.87	130.57	-99.19	166.66	151.97	14.69	11.346	
3,400.00	3,398.50	3,401.00	3,401.00	8.55	7.46	-103.75	130.57	-99.19	167.26	152.30	14.96	11.182	
3,500.00	3,498.49	3,500.99	3,500.99	8.72	7.59	-59.04	130.57	-99.19	167.47	152.26	15.21	11.008	
3,600.00	3,598.49	3,600.99	3,600.99	8.83	7.71	-59.04	130.57	-99.19	167.47	152.01	15.46	10.833	
3,700.00	3,698.49	3,700.99	3,700.99	8.93	7.84	-59.04	130.57	-99.19	167.47	151.77	15.70	10.666	
3,800.00	3,798.49	3,801.01	3,801.01	9.04	7.96	-59.04	130.57	-99.19	167.47	151.53	15.94	10.505	
3,900.00	3,898.49	3,902.40	3,902.38	9.14	8.18	-58.43	131.87	-97.90	167.04	150.87	16.17	10.332	
4,000.00	3,998.49	4,002.66	4,002.54	9.24	8.27	-56.96	134.97	-94.80	166.08	149.74	16.34	10.164	
4,100.00	4,098.49	4,102.56	4,102.34	9.35	8.40	-55.43	138.14	-91.62	165.20	148.65	16.55	9.982	
4,200.00	4,198.49	4,202.46	4,202.14	9.45	8.55	-53.89	141.32	-88.45	164.45	147.68	16.77	9.807	
4,300.00	4,298.49	4,302.36	4,301.93	9.55	8.70	-52.34	144.49	-85.27	163.81	146.83	16.99	9.644	
4,400.00	4,398.49	4,402.25	4,401.73	9.65	8.87	-50.78	147.67	-82.09	163.30	146.09	17.21	9.491	
4,500.00	4,498.49	4,502.15	4,501.53	9.75	9.04	-49.21	150.85	-78.92	162.91	145.48	17.43	9.349	
4,600.00	4,598.49	4,602.05	4,601.33	9.86	9.23	-47.63	154.02	-75.74	162.64	144.99	17.65	9.217	
4,700.00	4,698.49	4,701.95	4,701.13	9.96	9.42	-46.04	157.20	-72.57	162.50	144.63	17.87	9.094	
4,765.97	4,764.47	4,767.86	4,766.97	10.02	9.55	-45.00	159.29	-70.47	162.47	144.45	18.02	9.018	
4,800.00	4,798.49	4,801.85	4,800.92	10.06	9.62	-44.46	160.37	-69.39	162.48	144.38	18.09	8.980	
4,900.00	4,898.49	4,901.75	4,900.72	10.16	9.82	-42.88	163.55	-66.21	162.58	144.26	18.32	8.875	

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



FLAT CREEK
RESOURCES

Anticollision Report

Company:	Flat Creek Resources, LLC	Local Co-ordinate Reference:	Well Phantom Bank 31 Fed Com No. 511H
Project:	Eddy County, New Mexico NAD27 NME	TVD Reference:	RKB=3129+25 @ 3154.00ft
Reference Site:	Phantom Bank 31 Fed Com	MD Reference:	RKB=3129+25 @ 3154.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Phantom Bank 31 Fed Com No. 511H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev2	Offset TVD Reference:	Offset Datum

Offset Design: Phantom Bank 31 Fed Com - Phantom Bank 31 Fed Com No. 201H - Original Hole - rev0												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference	Offset	Semi Major Axis		Highside		Offset Wellbore Centre		Distance		Minimum	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)	Separation (ft)		
5,000.00	4,998.49	5,001.65	5,000.52	10.26	10.03	-41.30	166.73	-63.04	162.81	144.26	18.55	8.777	
5,100.00	5,098.47	5,101.50	5,100.27	10.51	10.25	26.31	169.90	-59.86	161.64	142.81	18.83	8.582	
5,200.00	5,198.33	5,201.18	5,199.85	10.82	10.48	28.80	173.07	-56.70	157.58	138.23	19.35	8.144	
5,300.00	5,297.97	5,300.57	5,299.14	10.84	10.71	32.09	176.23	-53.54	150.96	131.28	19.68	7.670	
5,400.00	5,397.52	5,400.23	5,398.71	10.89	10.91	35.77	179.30	-50.46	144.11	124.13	19.97	7.214	
5,500.00	5,497.07	5,501.11	5,499.57	10.96	11.13	38.83	180.57	-49.19	137.09	116.72	20.37	6.729	
5,600.00	5,596.63	5,600.67	5,599.13	11.04	11.27	41.44	180.57	-49.19	129.86	109.07	20.79	6.247	
5,700.00	5,696.18	5,700.23	5,698.68	11.13	11.36	44.34	180.57	-49.19	122.93	101.78	21.15	5.812	
5,800.00	5,795.74	5,799.78	5,798.24	11.24	11.45	47.59	180.57	-49.19	116.35	94.82	21.53	5.403	
5,900.00	5,895.29	5,899.34	5,897.79	11.36	11.55	51.20	180.57	-49.19	110.19	88.27	21.93	5.026	
6,000.00	5,994.84	5,998.89	5,997.34	11.49	11.64	55.22	180.57	-49.19	104.52	82.20	22.32	4.683	
6,100.00	6,094.40	6,098.44	6,096.90	11.63	11.74	59.68	180.57	-49.19	99.43	76.72	22.71	4.378	
6,200.00	6,193.95	6,198.00	6,196.45	11.78	11.83	64.58	180.57	-49.19	95.00	71.92	23.08	4.116	
6,300.00	6,293.50	6,297.55	6,296.00	11.94	11.92	69.91	180.57	-49.19	91.33	67.92	23.41	3.902	
6,400.00	6,393.06	6,397.10	6,395.56	12.11	12.01	75.63	180.57	-49.19	88.52	64.83	23.69	3.737	
6,500.00	6,492.61	6,496.66	6,495.11	12.30	12.11	81.66	180.57	-49.19	86.65	62.75	23.90	3.625	
6,600.00	6,592.17	6,596.21	6,594.67	12.49	12.20	87.88	180.57	-49.19	85.79	61.73	24.05	3.567	
6,633.73	6,625.74	6,629.79	6,628.24	12.56	12.23	90.00	180.57	-49.19	85.73	61.64	24.09	3.559	
6,700.00	6,691.72	6,695.77	6,694.22	12.69	12.29	94.15	180.57	-49.19	85.96	61.81	24.14	3.561	
6,800.00	6,791.27	6,795.32	6,793.77	12.90	12.38	100.33	180.57	-49.19	87.15	62.97	24.18	3.604	
6,900.00	6,890.83	6,894.87	6,893.33	13.12	12.48	106.27	180.57	-49.19	89.33	65.12	24.21	3.690	
7,000.00	6,990.38	6,994.43	6,992.88	13.35	12.57	111.87	180.57	-49.19	92.43	68.20	24.24	3.814	
7,100.00	7,089.93	7,093.98	7,092.43	13.58	12.66	117.06	180.57	-49.19	96.36	72.07	24.29	3.967	
7,200.00	7,189.49	7,193.54	7,191.99	13.83	12.75	121.82	180.57	-49.19	101.02	76.63	24.38	4.143	
7,300.00	7,289.10	7,293.14	7,291.60	14.05	12.84	125.91	180.57	-49.19	105.94	81.46	24.49	4.326	
7,400.00	7,388.93	7,392.98	7,391.43	14.35	12.94	128.35	180.57	-49.19	109.34	84.63	24.71	4.425	
7,500.00	7,488.91	7,492.95	7,491.41	14.66	13.03	129.23	180.57	-49.19	110.68	85.70	24.98	4.430	
7,600.00	7,588.91	7,592.95	7,591.41	14.72	13.12	63.48	180.57	-49.19	110.69	85.55	25.14	4.403	
7,700.00	7,688.91	7,692.95	7,691.41	14.80	13.21	63.48	180.57	-49.19	110.69	85.37	25.32	4.372	
7,800.00	7,788.91	7,792.95	7,791.41	14.87	13.30	63.48	180.57	-49.19	110.69	85.19	25.50	4.341	
7,900.00	7,888.91	7,892.95	7,891.41	14.95	13.39	63.48	180.57	-49.19	110.69	85.01	25.68	4.310	
8,000.00	7,988.91	8,005.05	8,003.28	15.02	13.45	62.02	181.08	-54.25	107.09	81.21	25.88	4.138	
8,100.00	8,088.91	8,117.86	8,112.89	15.09	13.71	52.43	183.65	-79.99	88.75	62.45	26.30	3.374	
8,200.00	8,188.91	8,217.38	8,203.77	15.17	14.04	26.52	187.66	-120.05	64.35	37.62	26.73	2.407	
8,249.64	8,238.54	8,260.89	8,241.04	15.20	14.19	5.71	189.89	-142.37	59.03	31.62	27.41	2.153 CC, ES, SF	
8,300.00	8,288.91	8,300.00	8,273.00	15.24	14.33	-15.18	192.13	-164.78	65.81	37.29	28.52	2.308	
8,400.00	8,388.91	8,369.55	8,325.77	15.32	14.54	-43.23	196.63	-209.80	111.29	81.46	29.83	3.730	
8,500.00	8,488.91	8,425.22	8,363.82	15.39	14.70	-55.72	200.67	-250.21	177.51	147.13	30.39	5.842	
8,600.00	8,588.91	8,470.55	8,391.77	15.47	14.81	-62.01	204.22	-285.71	253.16	222.34	30.83	8.212	
8,700.00	8,688.91	8,500.00	8,408.38	15.54	14.87	-64.97	206.64	-309.90	334.57	303.37	31.20	10.723	
8,800.00	8,788.91	8,538.56	8,428.20	15.61	14.96	-67.96	209.93	-342.80	419.50	387.86	31.64	13.259	
8,900.00	8,888.91	8,564.38	8,440.21	15.69	15.02	-69.54	212.20	-365.54	507.31	475.29	32.02	15.841	
9,000.00	8,988.91	8,586.23	8,449.56	15.76	15.09	-70.69	214.17	-385.19	597.19	564.79	32.40	18.433	
9,100.00	9,088.91	8,600.00	8,455.06	15.84	15.15	-71.34	215.42	-397.75	688.69	655.95	32.73	21.039	
9,200.00	9,188.91	8,621.06	8,462.89	15.91	15.29	-72.23	217.37	-417.20	781.35	748.23	33.12	23.592	
9,300.00	9,288.91	8,650.00	8,472.46	15.99	15.55	-73.28	220.09	-444.38	875.37	841.81	33.56	26.085	
9,400.00	9,388.91	8,650.00	8,472.46	16.06	15.55	-73.28	220.09	-444.38	969.57	935.74	33.83	28.658	
9,500.00	9,488.91	8,650.00	8,472.46	16.14	15.55	-73.28	220.09	-444.38	1,064.83	1,030.72	34.11	31.219	
9,600.00	9,588.91	8,668.02	8,477.72	16.21	15.75	-73.86	221.80	-461.53	1,160.46	1,125.96	34.50	33.636	
9,700.00	9,688.91	8,676.69	8,480.06	16.29	15.86	-74.12	222.63	-469.84	1,256.65	1,221.81	34.84	36.070	
9,800.00	9,788.91	8,700.00	8,485.71	16.37	16.13	-74.76	224.88	-492.33	1,353.53	1,318.25	35.27	38.372	
9,900.00	9,888.91	8,700.00	8,485.71	16.44	16.13	-74.76	224.88	-492.33	1,450.23	1,414.66	35.57	40.774	

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



Anticollision Report

Company:	Flat Creek Resources, LLC	Local Co-ordinate Reference:	Well Phantom Bank 31 Fed Com No. 511H
Project:	Eddy County, New Mexico NAD27 NME	TVD Reference:	RKB=3129+25 @ 3154.00ft
Reference Site:	Phantom Bank 31 Fed Com	MD Reference:	RKB=3129+25 @ 3154.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Phantom Bank 31 Fed Com No. 511H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev2	Offset TVD Reference:	Offset Datum

Offset Design: Phantom Bank 31 Fed Com - Phantom Bank 31 Fed Com No. 201H - Original Hole - rev0														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		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			
10,000.00	9,988.91	8,700.00	8,485.71	16.52	16.13	-74.76	224.88	-492.33	1,547.36	1,511.49	35.86	43.144			
10,100.00	10,088.91	8,700.00	8,485.71	16.59	16.13	-74.76	224.88	-492.33	1,644.83	1,608.66	36.17	45.481			
10,200.00	10,188.91	8,700.00	8,485.71	16.67	16.13	-74.76	224.88	-492.33	1,742.58	1,706.11	36.47	47.783			
10,300.00	10,288.91	8,700.00	8,485.71	16.74	16.13	-74.76	224.88	-492.33	1,840.58	1,803.80	36.78	50.049			

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



FLAT CREEK
RESOURCES

Anticollision Report

Company:	Flat Creek Resources, LLC	Local Co-ordinate Reference:	Well Phantom Bank 31 Fed Com No. 511H
Project:	Eddy County, New Mexico NAD27 NME	TVD Reference:	RKB=3129+25 @ 3154.00ft
Reference Site:	Phantom Bank 31 Fed Com	MD Reference:	RKB=3129+25 @ 3154.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Phantom Bank 31 Fed Com No. 511H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev2	Offset TVD Reference:	Offset Datum

Offset Design: Phantom Bank 31 Fed Com - Phantom Bank 31 Fed Com No. 501H - Original Hole - Surveys Original Hole													Offset Site Error: 0.00 ft
Survey Program: 176-MWD, 1024-MWD, 3709-MWD, 15915-MWD													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	
0.00	0.00	1.51	1.51	0.00	0.01	-116.72	-49.49	-98.32	110.07				
100.00	100.00	102.18	102.18	0.43	0.61	-116.69	-49.30	-98.06	109.76	108.72	1.04	105.896	
200.00	200.00	202.82	202.81	1.25	1.21	-116.61	-48.75	-97.30	108.84	106.38	2.46	44.229	
300.00	300.00	303.02	303.00	1.75	1.75	-116.59	-48.09	-96.06	107.43	103.94	3.50	30.734	
400.00	400.00	402.73	402.70	2.13	2.15	-116.43	-47.27	-95.09	106.20	101.92	4.28	24.815	
500.00	500.00	502.59	502.56	2.46	2.50	-115.83	-45.81	-94.62	105.13	100.19	4.94	21.275	
600.00	600.00	602.50	602.45	2.75	2.82	-114.88	-43.82	-94.50	104.18	98.65	5.52	18.859	
700.00	700.00	702.28	702.20	3.02	3.13	-113.76	-41.65	-94.60	103.36	97.32	6.05	17.095	
800.00	800.00	802.93	802.82	3.27	3.44	-112.41	-39.05	-94.71	102.45	95.92	6.53	15.679	
900.00	900.00	902.34	902.18	3.50	3.75	-110.72	-35.89	-94.88	101.44	94.46	6.98	14.527	
1,000.00	1,000.00	1,002.41	1,002.20	3.72	3.97	-109.04	-32.79	-95.01	100.51	93.15	7.36	13.652	
1,100.00	1,100.00	1,101.95	1,101.72	3.92	4.12	-107.97	-30.87	-95.17	100.05	92.34	7.71	12.976	
1,127.88	1,127.88	1,129.61	1,129.38	3.98	4.15	-107.88	-30.70	-95.19	100.02	92.19	7.83	12.782 CC	
1,200.00	1,200.00	1,201.26	1,201.02	4.12	4.25	-108.12	-31.17	-95.24	100.21	92.06	8.15	12.298 ES	
1,300.00	1,300.00	1,301.00	1,300.75	4.31	4.42	-108.83	-32.55	-95.46	100.86	92.25	8.62	11.707	
1,400.00	1,400.00	1,401.05	1,400.79	4.50	4.57	-109.61	-34.08	-95.68	101.57	92.62	8.96	11.340	
1,500.00	1,500.00	1,501.13	1,500.86	4.68	4.73	-110.44	-35.71	-95.82	102.26	92.97	9.29	11.006	
1,600.00	1,600.00	1,601.28	1,601.00	4.85	4.90	-111.17	-37.12	-95.86	102.79	93.17	9.62	10.686	
1,700.00	1,700.00	1,701.36	1,701.07	5.02	5.07	-111.79	-38.33	-95.87	103.25	93.31	9.94	10.386	
1,800.00	1,800.00	1,801.15	1,800.86	5.19	5.25	-112.37	-39.48	-95.90	103.71	93.45	10.26	10.110	
1,900.00	1,900.00	1,900.80	1,900.50	5.35	5.43	-113.00	-40.84	-96.20	104.51	93.94	10.57	9.884	
2,000.00	2,000.00	2,000.76	2,000.44	5.50	5.63	-113.66	-42.34	-96.65	105.53	94.63	10.89	9.688	
2,100.00	2,099.99	2,101.17	2,100.84	5.65	5.82	-115.54	-43.90	-96.88	107.18	95.98	11.20	9.569	
2,200.00	2,199.96	2,201.25	2,200.91	5.81	6.02	-160.67	-45.28	-96.82	110.17	98.66	11.51	9.569 SF	
2,300.00	2,299.86	2,300.87	2,300.52	5.98	6.22	-161.99	-46.65	-96.82	114.92	103.07	11.85	9.701	
2,400.00	2,399.73	2,400.69	2,400.33	6.17	6.43	-163.21	-47.84	-97.04	120.66	108.46	12.20	9.889	
2,500.00	2,499.59	2,500.76	2,500.40	6.37	6.63	-164.19	-48.70	-97.29	126.32	113.74	12.57	10.048	
2,600.00	2,599.45	2,600.64	2,600.28	6.58	6.83	-165.05	-49.43	-97.50	131.90	118.95	12.95	10.184	
2,700.00	2,699.31	2,700.65	2,700.29	6.80	7.02	-165.75	-49.94	-97.70	137.40	124.06	13.34	10.297	
2,800.00	2,799.18	2,800.46	2,800.10	7.04	7.21	-166.36	-50.34	-97.91	142.87	129.12	13.75	10.393	
2,900.00	2,899.04	2,900.07	2,899.70	7.28	7.39	-166.89	-50.69	-98.23	148.41	134.25	14.16	10.480	
3,000.00	2,998.90	2,999.76	2,999.39	7.53	7.57	-167.40	-51.20	-98.70	154.19	139.60	14.59	10.566	
3,100.00	3,098.77	3,100.03	3,099.66	7.78	7.76	-167.90	-51.70	-99.02	159.84	144.82	15.02	10.639	
3,200.00	3,198.63	3,200.21	3,199.84	8.05	7.95	-168.43	-52.21	-98.99	165.21	149.77	15.44	10.701	
3,300.00	3,298.53	3,300.19	3,299.82	8.31	8.13	-168.98	-52.89	-98.70	169.63	153.80	15.83	10.715	
3,400.00	3,398.50	3,400.80	3,400.42	8.55	8.29	-169.45	-53.61	-98.20	172.20	156.01	16.19	10.639	
3,500.00	3,498.49	3,500.86	3,500.47	8.72	8.45	-124.92	-54.47	-97.22	172.74	156.29	16.45	10.504	
3,600.00	3,598.49	3,601.39	3,600.99	8.83	8.60	-125.48	-55.60	-95.93	172.34	155.70	16.64	10.357	
3,700.00	3,698.49	3,701.14	3,700.73	8.93	8.71	-126.02	-56.69	-94.63	171.91	155.10	16.81	10.224	
3,790.25	3,788.75	3,790.68	3,790.25	9.03	8.79	-126.52	-57.72	-93.50	171.61	154.61	16.99	10.099	
3,800.00	3,798.49	3,799.91	3,799.48	9.04	8.82	-126.61	-57.93	-93.35	171.62	154.60	17.02	10.081	
3,900.00	3,898.49	3,894.62	3,893.98	9.14	9.22	-128.52	-63.60	-91.26	173.52	156.14	17.39	9.980	
4,000.00	3,998.49	3,989.62	3,988.27	9.24	9.92	-131.94	-74.62	-88.08	178.49	160.60	17.90	9.972	
4,100.00	4,098.49	4,083.63	4,080.92	9.35	10.43	-136.29	-89.94	-84.02	186.83	168.48	18.35	10.179	
4,200.00	4,198.49	4,177.11	4,172.37	9.45	10.81	-141.03	-108.81	-79.53	199.00	180.17	18.83	10.569	
4,300.00	4,298.49	4,273.08	4,266.09	9.55	11.01	-145.24	-129.12	-76.00	213.92	194.67	19.25	11.115	
4,400.00	4,398.49	4,369.86	4,360.68	9.65	11.17	-148.63	-149.51	-73.81	230.49	210.88	19.61	11.753	
4,500.00	4,498.49	4,467.14	4,455.79	9.75	11.34	-151.50	-169.84	-71.91	247.77	227.79	19.98	12.403	
4,600.00	4,598.49	4,560.77	4,547.19	9.86	11.53	-153.86	-190.15	-70.72	266.58	246.28	20.30	13.131	
4,700.00	4,698.49	4,655.52	4,639.41	9.96	11.73	-155.85	-211.84	-70.50	287.30	266.66	20.64	13.919	
4,800.00	4,798.49	4,756.46	4,737.75	10.06	11.96	-157.65	-234.60	-70.33	308.04	286.99	21.05	14.631	
4,900.00	4,898.49	4,851.75	4,830.81	10.16	12.25	-159.08	-255.12	-70.11	328.06	306.59	21.47	15.280	

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

FLAT CREEK
RESOURCES

Anticollision Report

Company:	Flat Creek Resources, LLC	Local Co-ordinate Reference:	Well Phantom Bank 31 Fed Com No. 511H
Project:	Eddy County, New Mexico NAD27 NME	TVD Reference:	RKB=3129+25 @ 3154.00ft
Reference Site:	Phantom Bank 31 Fed Com	MD Reference:	RKB=3129+25 @ 3154.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Phantom Bank 31 Fed Com No. 511H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev2	Offset TVD Reference:	Offset Datum

Offset Design: Phantom Bank 31 Fed Com - Phantom Bank 31 Fed Com No. 501H - Original Hole - Surveys Original Hole											Offset Site Error:	0.00 ft
Survey Program: 176-MWD, 1024-MWD, 3709-MWD, 15915-MWD											Offset Well Error:	0.00 ft
Reference	Offset	Semi Major Axis		Highside		Offset Wellbore Centre		Distance		Minimum	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)	Separation (ft)	
5,000.00	4,998.49	4,942.22	4,918.57	10.26	12.59	-160.48	-277.09	-69.56	350.69	328.78	21.90	16.011
5,100.00	5,098.47	5,041.74	5,015.05	10.51	12.90	-95.94	-301.44	-68.64	373.82	351.26	22.56	16.568
5,200.00	5,198.33	5,140.51	5,110.99	10.82	13.18	-97.46	-324.92	-67.57	396.95	373.68	23.26	17.062
5,300.00	5,297.97	5,238.60	5,206.37	10.84	13.46	-99.34	-347.80	-66.34	420.54	396.85	23.68	17.757
5,400.00	5,397.52	5,339.00	5,304.15	10.89	13.76	-101.49	-370.51	-65.00	444.13	419.99	24.15	18.393
5,500.00	5,497.07	5,439.88	5,402.67	10.96	14.07	-103.40	-392.19	-63.63	467.12	442.49	24.63	18.966
5,600.00	5,596.63	5,528.25	5,488.97	11.04	14.37	-104.92	-411.17	-62.45	490.54	465.49	25.05	19.582
5,700.00	5,696.18	5,614.66	5,572.93	11.13	14.68	-106.25	-431.57	-61.88	516.44	490.96	25.48	20.270
5,800.00	5,795.74	5,705.80	5,661.21	11.24	15.01	-107.44	-454.20	-62.09	543.91	517.97	25.94	20.968
5,900.00	5,895.29	5,801.88	5,754.22	11.36	15.34	-108.53	-478.31	-62.84	571.90	545.46	26.44	21.632
6,000.00	5,994.84	5,902.08	5,851.34	11.49	15.69	-109.54	-502.96	-63.83	599.60	572.62	26.97	22.229
6,100.00	6,094.40	6,002.72	5,949.08	11.63	16.05	-110.46	-526.87	-64.68	626.60	599.08	27.52	22.771
6,200.00	6,193.95	6,087.51	6,031.41	11.78	16.38	-111.22	-547.15	-64.94	653.91	625.93	27.98	23.368
6,300.00	6,293.50	6,179.49	6,120.27	11.94	16.75	-112.08	-570.89	-64.21	683.14	654.62	28.53	23.946
6,400.00	6,393.06	6,284.15	6,221.61	12.11	17.16	-113.00	-597.02	-62.97	711.70	682.55	29.15	24.415
6,500.00	6,492.61	6,397.61	6,331.95	12.30	17.61	-113.99	-623.35	-60.83	738.69	708.86	29.83	24.764
6,600.00	6,592.17	6,475.47	6,407.71	12.49	17.96	-114.64	-641.18	-58.97	765.55	735.23	30.32	25.247
6,700.00	6,691.72	6,575.07	6,504.28	12.69	18.39	-115.40	-665.49	-56.98	793.98	763.02	30.96	25.646
6,800.00	6,791.27	6,669.66	6,596.16	12.90	18.77	-116.08	-687.86	-55.00	821.77	790.24	31.53	26.064
6,900.00	6,890.83	6,754.80	6,678.71	13.12	19.11	-116.65	-708.61	-53.14	850.38	818.34	32.04	26.541
7,000.00	6,990.38	6,858.21	6,778.85	13.35	19.53	-117.31	-734.31	-50.74	879.58	846.90	32.68	26.914
7,100.00	7,089.93	6,954.45	6,872.26	13.58	19.92	-117.89	-757.37	-48.44	907.98	874.70	33.28	27.283
7,200.00	7,189.49	7,036.57	6,951.82	13.83	20.27	-118.37	-777.59	-46.33	937.12	903.32	33.80	27.722
7,300.00	7,289.10	7,137.49	7,049.40	14.05	20.70	-119.21	-803.18	-43.49	966.81	932.38	34.43	28.079
7,400.00	7,388.93	7,246.11	7,154.76	14.35	21.15	-120.05	-829.41	-40.32	993.85	958.72	35.13	28.294
7,500.00	7,488.91	7,361.77	7,267.37	14.66	21.63	-120.63	-855.56	-36.87	1,017.70	981.87	35.84	28.399
7,600.00	7,588.91	7,471.13	7,374.24	14.72	22.08	173.52	-878.51	-33.53	1,038.90	1,002.51	36.39	28.552
7,700.00	7,688.91	7,576.63	7,477.48	14.80	22.52	173.51	-900.08	-30.84	1,059.51	1,022.59	36.92	28.694
7,800.00	7,788.91	7,690.87	7,589.56	14.87	22.99	173.49	-922.02	-28.02	1,078.87	1,041.37	37.50	28.770
7,900.00	7,888.91	7,810.20	7,706.99	14.95	23.47	173.45	-942.93	-24.89	1,096.59	1,058.51	38.08	28.794
8,000.00	7,988.91	7,942.55	7,837.81	15.02	24.01	173.38	-962.67	-21.20	1,111.69	1,072.98	38.71	28.718
8,100.00	8,088.91	8,091.26	7,985.45	15.09	24.60	173.27	-979.91	-17.16	1,123.68	1,084.33	39.35	28.555
8,200.00	8,188.91	8,241.53	8,135.31	15.17	25.19	173.17	-990.37	-13.89	1,130.88	1,090.94	39.94	28.314
8,300.00	8,288.91	8,360.58	8,254.27	15.24	25.57	173.12	-994.66	-12.45	1,134.55	1,094.19	40.36	28.109
8,400.00	8,388.91	8,470.29	8,363.92	15.32	25.85	173.06	-997.53	-10.90	1,137.32	1,096.61	40.70	27.943
8,500.00	8,488.91	8,579.71	8,473.30	15.39	26.07	172.94	-999.23	-8.20	1,139.15	1,098.18	40.97	27.803
8,600.00	8,588.91	8,678.18	8,571.74	15.47	26.26	172.86	-1,000.49	-6.50	1,140.63	1,099.39	41.24	27.656
8,700.00	8,688.91	8,770.63	8,664.17	15.54	26.47	172.88	-1,002.35	-6.57	1,142.62	1,101.07	41.55	27.498
8,800.00	8,788.91	8,868.15	8,761.66	15.61	26.72	172.91	-1,004.87	-7.00	1,145.12	1,103.24	41.89	27.339
8,900.00	8,888.91	8,972.05	8,865.53	15.69	26.99	172.94	-1,007.31	-7.34	1,147.42	1,105.20	42.22	27.177
9,000.00	8,988.91	9,073.07	8,966.53	15.76	27.24	172.97	-1,009.49	-7.57	1,149.53	1,106.98	42.55	27.016
9,100.00	9,088.91	9,172.72	9,066.16	15.84	27.49	173.00	-1,011.63	-8.00	1,151.61	1,108.73	42.87	26.860
9,200.00	9,188.91	9,275.14	9,168.55	15.91	27.72	173.07	-1,013.87	-8.99	1,153.67	1,110.49	43.18	26.718
9,300.00	9,288.91	9,382.51	9,275.89	15.99	27.92	173.15	-1,015.79	-10.44	1,155.28	1,111.83	43.44	26.593
9,400.00	9,388.91	9,498.50	9,391.86	16.06	28.04	173.25	-1,016.73	-12.38	1,155.89	1,112.30	43.59	26.519
9,500.00	9,488.91	9,599.37	9,492.71	16.14	28.04	173.34	-1,016.82	-14.25	1,155.76	1,112.10	43.66	26.469
9,600.00	9,588.91	9,701.19	9,594.51	16.21	28.03	173.43	-1,016.74	-16.08	1,155.48	1,111.75	43.72	26.427
9,700.00	9,688.91	9,802.06	9,695.37	16.29	28.00	173.51	-1,016.52	-17.62	1,155.09	1,111.34	43.75	26.401
9,766.61	9,755.51	9,863.71	9,757.01	16.34	27.99	173.53	-1,016.35	-18.20	1,154.85	1,111.04	43.81	26.363
9,800.00	9,788.91	9,890.19	9,783.49	16.37	28.01	173.56	-1,016.49	-18.71	1,154.95	1,111.08	43.87	26.328
9,900.00	9,888.91	9,991.16	9,883.97	16.44	28.34	173.97	-1,018.49	-26.74	1,156.06	1,111.81	44.25	26.126
10,000.00	9,988.91	10,157.32	10,038.41	16.52	29.24	176.92	-1,018.80	-86.45	1,152.61	1,107.62	44.99	25.619

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

FLAT CREEK
RESOURCES

Anticollision Report

Company:	Flat Creek Resources, LLC	Local Co-ordinate Reference:	Well Phantom Bank 31 Fed Com No. 511H
Project:	Eddy County, New Mexico NAD27 NME	TVD Reference:	RKB=3129+25 @ 3154.00ft
Reference Site:	Phantom Bank 31 Fed Com	MD Reference:	RKB=3129+25 @ 3154.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Phantom Bank 31 Fed Com No. 511H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev2	Offset TVD Reference:	Offset Datum

Offset Design: Phantom Bank 31 Fed Com - Phantom Bank 31 Fed Com No. 501H - Original Hole - Surveys Original Hole													Offset Site Error:	0.00 ft
Survey Program: 176-MWD, 1024-MWD, 3709-MWD, 15915-MWD													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		
10,100.00	10,088.91	10,218.00	10,091.87	16.59	29.42	178.35	-1,019.02	-115.14	1,150.65	1,105.31	45.34	25.377		
10,101.44	10,090.34	10,218.00	10,091.87	16.59	29.42	178.35	-1,019.02	-115.14	1,150.65	1,105.30	45.35	25.374		
10,200.00	10,188.91	10,260.08	10,128.04	16.67	29.56	179.42	-1,020.52	-136.59	1,153.41	1,107.70	45.72	25.230		
10,300.00	10,288.91	10,311.00	10,170.14	16.74	29.74	-179.17	-1,024.08	-164.99	1,161.59	1,115.50	46.10	25.200		
10,400.00	10,388.91	10,361.79	10,210.19	16.82	29.87	-177.65	-1,028.71	-195.87	1,174.74	1,128.28	46.47	25.281		
10,500.00	10,488.91	10,405.00	10,242.65	16.89	29.99	-176.27	-1,032.83	-224.08	1,192.47	1,145.61	46.86	25.445		
10,600.00	10,588.91	10,449.61	10,273.96	16.97	30.11	-174.76	-1,037.54	-255.48	1,215.51	1,168.18	47.33	25.680		
10,700.00	10,688.91	10,499.00	10,305.12	17.05	30.25	-172.96	-1,043.59	-293.29	1,244.79	1,196.90	47.89	25.992		
10,800.00	10,788.91	10,499.00	10,305.12	17.12	30.25	-172.96	-1,043.59	-293.29	1,279.28	1,230.96	48.32	26.476		
10,900.00	10,888.91	10,539.08	10,327.10	17.20	30.43	-171.41	-1,048.46	-326.44	1,319.30	1,270.15	49.15	26.843		
11,000.00	10,988.91	10,562.53	10,338.28	17.27	30.54	-170.46	-1,050.92	-346.89	1,364.56	1,314.65	49.90	27.344		
11,100.00	11,088.91	10,592.00	10,350.51	17.35	30.68	-169.23	-1,053.61	-373.56	1,414.87	1,364.05	50.82	27.841		
11,200.00	11,188.91	10,592.00	10,350.51	17.43	30.68	-169.23	-1,053.61	-373.56	1,469.64	1,418.31	51.33	28.632		
11,300.00	11,288.91	10,620.33	10,360.52	17.50	30.96	-168.02	-1,055.59	-399.98	1,528.53	1,476.17	52.36	29.194		
11,400.00	11,388.91	10,636.98	10,365.72	17.58	31.12	-167.30	-1,056.40	-415.78	1,591.17	1,537.98	53.20	29.911		
11,500.00	11,488.90	10,650.79	10,369.64	17.65	31.25	-81.92	-1,056.88	-429.01	1,657.20	1,603.22	53.98	30.701		
11,600.00	11,588.21	10,686.00	10,377.99	17.97	31.61	-71.62	-1,057.28	-463.21	1,725.11	1,669.89	55.21	31.244		
11,700.00	11,684.17	10,686.00	10,377.99	18.46	31.61	-63.46	-1,057.28	-463.21	1,791.34	1,735.68	55.66	32.182		
11,800.00	11,773.87	10,723.85	10,384.41	18.98	32.22	-55.48	-1,055.94	-500.47	1,854.25	1,797.39	56.86	32.613		
11,900.00	11,854.58	10,779.00	10,389.11	19.49	33.12	-48.80	-1,049.88	-555.04	1,911.56	1,853.13	58.43	32.715		

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

FLAT CREEK
RESOURCES

Anticollision Report

Company:	Flat Creek Resources, LLC	Local Co-ordinate Reference:	Well Phantom Bank 31 Fed Com No. 511H
Project:	Eddy County, New Mexico NAD27 NME	TVD Reference:	RKB=3129+25 @ 3154.00ft
Reference Site:	Phantom Bank 31 Fed Com	MD Reference:	RKB=3129+25 @ 3154.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Phantom Bank 31 Fed Com No. 511H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev2	Offset TVD Reference:	Offset Datum

Offset Design: Phantom Bank 31 Fed Com - Phantom Bank 31 Fed Com No. 502H - Original Hole - Surveys Original Hole												Offset Site Error:	0.00 ft
Survey Program: 220-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)			
0.00	0.00	2.49	2.49	0.00	0.02	0.61	81.22	0.86	81.23				
100.00	100.00	101.98	101.98	0.43	0.70	0.59	81.55	0.85	81.55	80.42	1.13	72.255	
200.00	200.00	201.47	201.46	1.25	1.38	0.55	82.49	0.79	82.50	79.87	2.64	31.308	
300.00	300.00	300.85	300.83	1.75	1.94	0.50	84.09	0.73	84.11	80.42	3.69	22.786	
400.00	400.00	400.79	400.75	2.13	2.34	0.68	86.14	1.02	86.16	81.69	4.47	19.260	
500.00	500.00	502.31	502.26	2.46	2.76	0.95	87.29	1.45	87.31	82.10	5.21	16.756	
600.00	600.00	600.46	600.40	2.75	3.33	1.43	88.62	2.21	88.67	82.65	6.02	14.733	
700.00	700.00	699.50	699.39	3.02	4.09	2.02	91.45	3.23	91.56	84.52	7.03	13.017	
800.00	800.00	798.64	798.45	3.27	4.77	2.26	95.29	3.76	95.45	87.51	7.94	12.021	
900.00	900.00	899.03	898.75	3.50	5.04	2.04	99.54	3.55	99.67	91.22	8.45	11.793	
1,000.00	1,000.00	1,000.51	1,000.19	3.72	5.32	1.88	102.50	3.37	102.58	93.61	8.97	11.437	
1,100.00	1,100.00	1,102.25	1,101.92	3.92	5.58	2.08	104.04	3.77	104.11	94.67	9.44	11.024	
1,200.00	1,200.00	1,204.59	1,204.25	4.12	5.96	2.11	103.46	3.81	103.55	93.71	9.84	10.528	
1,300.00	1,300.00	1,305.29	1,304.93	4.31	7.09	1.93	101.14	3.42	101.22	90.94	10.28	9.844	
1,400.00	1,400.00	1,405.09	1,404.70	4.50	8.38	1.71	98.85	2.96	98.92	88.16	10.76	9.196	
1,500.00	1,500.00	1,505.22	1,504.80	4.68	8.89	1.50	96.60	2.53	96.66	85.45	11.21	8.625	
1,600.00	1,600.00	1,605.45	1,605.00	4.85	9.13	1.37	94.08	2.25	94.14	82.49	11.65	8.081	
1,700.00	1,700.00	1,705.50	1,705.01	5.02	9.37	1.27	91.37	2.02	91.43	79.34	12.09	7.564	
1,800.00	1,800.00	1,805.52	1,805.00	5.19	9.60	1.06	88.60	1.64	88.65	76.13	12.52	7.079	
1,900.00	1,900.00	1,905.66	1,905.09	5.35	9.83	0.72	85.69	1.08	85.73	72.78	12.96	6.617	
2,000.00	2,000.00	2,005.77	2,005.14	5.50	10.05	0.21	82.57	0.30	82.62	69.23	13.39	6.171	
2,100.00	2,099.99	2,105.76	2,105.08	5.65	10.27	-45.86	79.33	-0.52	78.76	64.94	13.82	5.700	
2,200.00	2,199.96	2,205.61	2,204.87	5.81	10.48	-47.99	76.00	-1.29	73.67	59.40	14.27	5.162	
2,300.00	2,299.86	2,305.18	2,304.39	5.98	10.69	-51.48	72.82	-1.96	67.71	52.96	14.75	4.590	
2,400.00	2,399.73	2,404.77	2,403.93	6.17	10.90	-56.10	69.85	-2.52	61.75	46.48	15.27	4.044	
2,500.00	2,499.59	2,504.42	2,503.54	6.37	11.11	-61.66	66.97	-3.11	56.37	40.55	15.82	3.564	
2,600.00	2,599.45	2,604.16	2,603.23	6.58	11.31	-68.30	64.12	-3.69	51.66	35.27	16.39	3.151	
2,700.00	2,699.31	2,704.01	2,703.04	6.80	11.51	-75.72	61.22	-3.83	47.50	30.52	16.99	2.797	
2,800.00	2,799.18	2,803.65	2,802.64	7.04	11.70	-83.97	58.35	-3.61	44.07	26.48	17.59	2.506	
2,900.00	2,899.04	2,903.16	2,902.13	7.28	11.89	-93.16	55.88	-3.61	42.14	23.95	18.19	2.316	
2,981.72	2,980.65	2,984.62	2,983.57	7.48	12.05	-100.94	54.16	-3.78	41.73	23.06	18.67	2.235 CC	
3,000.00	2,998.90	3,002.86	3,001.80	7.53	12.08	-102.65	53.80	-3.80	41.75	22.98	18.77	2.224	
3,100.00	3,098.77	3,102.64	3,101.57	7.78	12.27	-111.69	51.96	-3.85	42.48	23.16	19.31	2.199	
3,200.00	3,198.63	3,202.69	3,201.60	8.05	12.45	-120.21	50.06	-3.60	43.92	24.08	19.83	2.214	
3,300.00	3,298.53	3,302.80	3,301.67	8.31	12.64	-127.75	47.64	-2.79	45.10	24.78	20.32	2.219	
3,400.00	3,398.50	3,402.85	3,401.67	8.55	12.82	-133.75	44.79	-1.54	45.35	24.57	20.78	2.183	
3,500.00	3,498.49	3,502.85	3,501.61	8.72	13.01	-93.56	41.65	0.05	44.45	23.29	21.17	2.100	
3,600.00	3,598.49	3,602.33	3,601.05	8.83	13.18	-97.53	38.68	1.08	43.71	22.22	21.48	2.034	
3,609.95	3,608.44	3,612.23	3,610.94	8.84	13.20	-97.89	38.41	1.12	43.70	22.18	21.52	2.031 ES	
3,700.00	3,698.49	3,701.92	3,700.60	8.93	13.36	-100.80	36.14	1.04	44.16	22.37	21.79	2.027 SF	
3,800.00	3,798.49	3,801.72	3,800.37	9.04	13.53	-103.59	33.77	0.39	45.29	23.20	22.10	2.050	
3,900.00	3,898.49	3,901.53	3,900.15	9.14	13.70	-105.97	31.51	-0.66	46.89	24.48	22.41	2.093	
4,000.00	3,998.49	4,001.37	3,999.96	9.24	13.85	-107.58	29.66	-2.15	48.85	26.14	22.71	2.151	
4,100.00	4,098.49	4,101.30	4,099.86	9.35	14.01	-108.52	28.19	-4.00	51.07	28.05	23.03	2.218	
4,200.00	4,198.49	4,201.34	4,199.87	9.45	14.17	-109.78	26.40	-5.67	53.23	29.89	23.34	2.280	
4,300.00	4,298.49	4,301.24	4,299.74	9.55	14.33	-111.29	24.30	-7.17	55.38	31.71	23.67	2.340	
4,400.00	4,398.49	4,401.07	4,399.53	9.65	14.51	-112.36	22.44	-9.00	57.78	33.79	23.99	2.409	
4,500.00	4,498.49	4,501.33	4,499.76	9.75	14.70	-113.24	20.68	-10.85	60.15	35.84	24.31	2.474	
4,600.00	4,598.49	4,601.75	4,600.15	9.86	14.93	-114.67	18.60	-11.79	61.85	37.21	24.64	2.510	
4,700.00	4,698.49	4,701.51	4,699.89	9.96	15.17	-116.21	16.44	-12.41	63.34	38.38	24.96	2.537	
4,800.00	4,798.49	4,801.18	4,799.54	10.06	15.42	-117.19	14.57	-13.69	65.34	40.05	25.29	2.584	
4,900.00	4,898.49	4,901.30	4,899.63	10.16	15.69	-117.82	12.93	-15.24	67.46	41.83	25.63	2.632	

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



FLAT CREEK
RESOURCES

Anticollision Report

Company:	Flat Creek Resources, LLC	Local Co-ordinate Reference:	Well Phantom Bank 31 Fed Com No. 511H
Project:	Eddy County, New Mexico NAD27 NME	TVD Reference:	RKB=3129+25 @ 3154.00ft
Reference Site:	Phantom Bank 31 Fed Com	MD Reference:	RKB=3129+25 @ 3154.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Phantom Bank 31 Fed Com No. 511H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev2	Offset TVD Reference:	Offset Datum

Offset Design: Phantom Bank 31 Fed Com - Phantom Bank 31 Fed Com No. 502H - Original Hole - Surveys Original Hole													Offset Site Error:	0.00 ft
Survey Program: 220-MWD													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		
5,000.00	4,998.49	5,001.46	4,999.77	10.26	15.95	-118.33	11.50	-16.65	69.38	43.41	25.97	2.671		
5,100.00	5,098.47	5,101.84	5,100.13	10.51	16.19	-54.39	10.02	-17.53	69.85	43.44	26.41	2.645		
5,200.00	5,198.33	5,201.90	5,200.18	10.82	16.44	-59.11	8.38	-17.67	68.01	41.02	26.99	2.520		
5,300.00	5,297.97	5,301.37	5,299.64	10.84	16.69	-66.66	6.75	-17.81	65.24	37.89	27.35	2.385		
5,400.00	5,397.52	5,400.80	5,399.05	10.89	16.95	-75.25	5.20	-18.20	63.56	35.81	27.74	2.291		
5,454.64	5,451.92	5,455.14	5,453.38	10.92	17.09	-80.00	4.36	-18.52	63.32	35.35	27.96	2.264		
5,500.00	5,497.07	5,500.25	5,498.49	10.96	17.21	-83.89	3.67	-18.85	63.48	35.34	28.14	2.256		
5,600.00	5,596.63	5,599.63	5,597.85	11.04	17.46	-92.31	2.05	-19.58	64.97	36.47	28.50	2.280		
5,700.00	5,696.18	5,698.71	5,696.90	11.13	17.71	-100.95	-0.31	-19.53	68.34	39.52	28.82	2.371		
5,800.00	5,795.74	5,797.93	5,796.08	11.24	17.97	-109.27	-3.31	-18.74	73.69	44.59	29.10	2.532		
5,900.00	5,895.29	5,897.37	5,895.46	11.36	18.22	-116.46	-6.23	-17.81	80.31	50.93	29.38	2.734		
6,000.00	5,994.84	5,996.68	5,994.73	11.49	18.49	-122.39	-9.07	-17.03	87.90	58.25	29.66	2.964		
6,100.00	6,094.40	6,096.04	6,094.05	11.63	18.76	-126.92	-12.07	-16.94	96.27	66.32	29.96	3.213		
6,200.00	6,193.95	6,195.59	6,193.55	11.78	19.04	-130.42	-15.14	-17.39	105.06	74.78	30.28	3.469		
6,300.00	6,293.50	6,295.20	6,293.11	11.94	19.33	-133.27	-18.13	-18.07	114.03	83.41	30.62	3.724		
6,400.00	6,393.06	6,394.55	6,392.42	12.11	19.62	-135.71	-21.08	-18.75	123.19	92.22	30.97	3.978		
6,500.00	6,492.61	6,493.90	6,491.72	12.30	19.91	-137.90	-24.03	-19.19	132.65	101.33	31.32	4.235		
6,600.00	6,592.17	6,593.70	6,591.47	12.49	20.19	-139.72	-26.98	-19.87	142.16	110.48	31.68	4.487		
6,700.00	6,691.72	6,693.48	6,691.21	12.69	20.48	-141.12	-29.94	-21.13	151.54	119.48	32.06	4.727		
6,800.00	6,791.27	6,792.93	6,790.60	12.90	20.77	-142.35	-32.83	-22.40	160.94	128.50	32.44	4.961		
6,900.00	6,890.83	6,892.30	6,889.92	13.12	21.06	-143.53	-35.64	-23.45	170.45	137.62	32.82	5.193		
7,000.00	6,990.38	6,991.52	6,989.10	13.35	21.35	-144.59	-38.52	-24.38	180.14	146.92	33.22	5.423		
7,100.00	7,089.93	7,090.64	7,088.17	13.58	21.64	-145.57	-41.51	-25.19	190.05	156.42	33.63	5.651		
7,200.00	7,189.49	7,189.62	7,187.11	13.83	21.93	-146.50	-44.56	-25.70	200.22	166.17	34.05	5.881		
7,300.00	7,289.10	7,288.89	7,286.32	14.05	22.22	-147.37	-47.68	-25.94	210.12	175.66	34.45	6.098		
7,400.00	7,388.93	7,388.63	7,386.02	14.35	22.51	-147.73	-50.85	-26.22	217.36	182.38	34.98	6.214		
7,500.00	7,488.91	7,488.90	7,486.23	14.66	22.81	-147.53	-54.02	-26.60	221.60	186.06	35.53	6.236		
7,600.00	7,588.91	7,589.39	7,586.67	14.72	23.10	-147.25	-57.06	-27.16	223.84	187.98	35.86	6.242		
7,700.00	7,688.91	7,689.73	7,686.97	14.80	23.40	-147.79	-59.92	-27.86	225.87	189.68	36.19	6.241		
7,800.00	7,788.91	7,790.05	7,787.26	14.87	23.69	-148.30	-62.61	-28.58	227.76	191.24	36.53	6.236		
7,900.00	7,888.91	7,890.91	7,888.09	14.95	23.95	-148.71	-64.86	-29.09	229.41	192.56	36.85	6.226		
8,000.00	7,988.91	7,992.00	7,989.16	15.02	24.20	-148.89	-66.32	-29.08	230.65	193.51	37.14	6.210		
8,100.00	8,088.91	8,094.62	8,091.78	15.09	24.25	-148.95	-66.80	-29.06	231.05	193.78	37.27	6.199		
8,200.00	8,188.91	8,196.15	8,193.31	15.17	24.28	-148.94	-66.19	-29.36	230.39	193.01	37.38	6.163		
8,300.00	8,288.91	8,294.81	8,291.97	15.24	24.24	-148.85	-65.56	-29.34	229.85	192.39	37.46	6.135		
8,342.04	8,330.95	8,336.29	8,333.45	15.27	24.23	-148.79	-65.39	-29.17	229.80	192.30	37.50	6.129		
8,400.00	8,388.91	8,394.39	8,391.55	15.32	24.23	-148.71	-65.24	-28.87	229.82	192.28	37.54	6.122		
8,500.00	8,488.91	8,495.49	8,492.65	15.39	24.23	-148.72	-65.00	-29.07	229.52	191.88	37.63	6.099		
8,597.88	8,586.78	8,592.14	8,589.29	15.46	24.32	-148.93	-65.00	-30.03	229.01	191.20	37.81	6.057		
8,600.00	8,588.91	8,594.18	8,591.33	15.47	24.33	-148.93	-65.01	-30.06	229.01	191.19	37.82	6.056		
8,700.00	8,688.91	8,690.64	8,687.78	15.54	24.50	-149.33	-66.49	-31.02	229.82	191.73	38.08	6.034		
8,800.00	8,788.91	8,789.11	8,786.20	15.61	24.74	-149.88	-69.41	-31.91	231.91	193.48	38.43	6.034		
8,900.00	8,888.91	8,889.06	8,886.10	15.69	25.03	-150.47	-72.54	-32.84	234.17	195.33	38.84	6.030		
9,000.00	8,988.91	8,988.98	8,985.96	15.76	25.33	-151.06	-75.72	-33.85	236.45	197.26	39.19	6.033		
9,100.00	9,088.91	9,088.87	9,085.78	15.84	25.62	-151.70	-79.04	-35.08	238.78	199.26	39.53	6.041		
9,200.00	9,188.91	9,187.45	9,184.30	15.91	25.91	-152.32	-82.52	-36.16	241.38	201.51	39.87	6.054		
9,300.00	9,288.91	9,285.73	9,282.50	15.99	26.20	-152.79	-86.32	-36.45	244.68	204.46	40.21	6.084		
9,400.00	9,388.91	9,389.91	9,386.62	16.06	26.53	-153.13	-89.64	-36.35	247.56	206.99	40.57	6.102		
9,500.00	9,488.91	9,493.92	9,490.63	16.14	26.85	-153.27	-90.84	-36.45	248.55	207.64	40.91	6.076		
9,600.00	9,588.91	9,592.22	9,588.93	16.21	27.12	-153.33	-91.53	-36.39	249.20	207.99	41.21	6.047		
9,700.00	9,688.91	9,690.66	9,687.36	16.29	27.38	-153.38	-92.78	-35.99	250.53	209.01	41.51	6.035		
9,800.00	9,788.91	9,789.61	9,786.29	16.37	27.61	-153.41	-94.46	-35.30	252.35	210.51	41.83	6.032		

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

FLAT CREEK
RESOURCES

Anticollision Report

Company:	Flat Creek Resources, LLC	Local Co-ordinate Reference:	Well Phantom Bank 31 Fed Com No. 511H
Project:	Eddy County, New Mexico NAD27 NME	TVD Reference:	RKB=3129+25 @ 3154.00ft
Reference Site:	Phantom Bank 31 Fed Com	MD Reference:	RKB=3129+25 @ 3154.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Phantom Bank 31 Fed Com No. 511H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev2	Offset TVD Reference:	Offset Datum

Offset Design: Phantom Bank 31 Fed Com - Phantom Bank 31 Fed Com No. 502H - Original Hole - Surveys Original Hole												Offset Site Error:	0.00 ft
Survey Program: 220-MWD												Offset Well Error:	0.00 ft
Rule Assigned:												Warning	
Measured Depth (ft)	Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
9,900.00	9,888.91	9,889.47	9,886.13	16.44	27.83	153.43	-96.44	-34.42	254.52	212.38	42.14	6.040	
10,000.00	9,988.91	9,989.81	9,986.45	16.52	28.04	153.51	-98.24	-33.90	256.36	213.93	42.43	6.042	
10,100.00	10,088.91	10,088.10	10,084.71	16.59	28.29	153.74	-100.70	-33.84	258.62	215.88	42.75	6.050	
10,200.00	10,188.91	10,187.98	10,184.54	16.67	28.55	154.10	-103.90	-34.12	261.38	218.29	43.09	6.066	
10,300.00	10,288.91	10,289.44	10,285.97	16.74	28.82	154.34	-106.51	-34.06	263.73	220.29	43.44	6.071	
10,400.00	10,388.91	10,390.92	10,387.43	16.82	29.07	154.43	-108.32	-33.65	265.51	221.74	43.77	6.067	
10,500.00	10,488.91	10,492.42	10,488.91	16.89	29.31	154.47	-109.52	-33.29	266.72	222.64	44.08	6.051	
10,600.00	10,588.91	10,592.99	10,589.48	16.97	29.47	154.46	-110.21	-32.89	267.52	223.17	44.35	6.032	
10,700.00	10,688.91	10,693.18	10,689.67	17.05	29.62	154.38	-110.65	-32.28	268.17	223.57	44.60	6.012	
10,800.00	10,788.91	10,792.17	10,788.66	17.12	29.76	154.39	-111.42	-31.99	269.00	224.17	44.84	6.000	
10,900.00	10,888.91	10,890.92	10,887.39	17.20	29.96	154.56	-112.86	-32.15	270.25	225.16	45.09	5.993	
11,000.00	10,988.91	10,998.21	10,994.41	17.27	30.40	155.99	-116.06	-38.12	270.64	224.96	45.68	5.924	
11,100.00	11,088.91	11,115.89	11,110.73	17.35	30.59	159.57	-117.56	-55.58	266.11	220.01	46.10	5.772	
11,200.00	11,188.91	11,216.42	11,207.59	17.43	30.80	165.10	-118.15	-81.91	258.48	211.84	46.64	5.543	
11,266.06	11,254.96	11,272.00	11,257.46	17.48	31.06	170.53	-121.52	-106.09	256.16	209.05	47.11	5.437	
11,300.00	11,288.91	11,297.02	11,278.56	17.50	31.17	173.53	-123.87	-119.32	256.98	209.63	47.35	5.427	
11,400.00	11,388.91	11,356.41	11,324.94	17.58	31.40	-178.42	-131.84	-155.48	271.36	223.22	48.13	5.638	
11,500.00	11,488.90	11,414.72	11,365.40	17.65	31.60	-85.79	-142.04	-196.13	304.63	255.58	49.05	6.210	
11,600.00	11,588.21	11,491.36	11,411.87	17.97	31.89	-71.14	-150.30	-256.40	348.38	298.45	49.93	6.978	
11,700.00	11,684.17	11,544.40	11,438.38	18.46	32.09	-60.67	-152.48	-302.25	397.35	346.51	50.84	7.816	
11,800.00	11,773.87	11,582.38	11,453.54	18.98	32.24	-52.76	-153.51	-337.03	449.26	397.59	51.67	8.694	
11,900.00	11,854.58	11,618.31	11,464.02	19.49	32.39	-46.22	-155.13	-371.35	502.26	449.89	52.38	9.590	
12,000.00	11,923.84	11,647.00	11,469.91	19.96	32.52	-41.14	-156.69	-399.37	553.62	500.78	52.85	10.476	
12,100.00	11,979.56	11,689.30	11,474.12	20.39	32.74	-36.83	-159.21	-441.36	601.57	548.31	53.25	11.296	
12,200.00	12,020.29	11,742.00	11,472.63	20.88	33.03	-33.32	-161.29	-493.97	643.66	589.97	53.69	11.989	
12,300.00	12,044.96	11,822.54	11,467.53	21.68	33.59	-30.94	-163.57	-574.31	673.58	619.08	54.50	12.359	
12,400.00	12,052.83	11,889.69	11,460.26	22.89	34.13	-29.87	-165.94	-641.02	691.50	636.32	55.18	12.531	
12,500.00	12,051.38	12,051.74	11,443.61	24.38	35.84	-29.14	-166.44	-802.10	699.12	641.80	57.33	12.195	
12,600.00	12,049.92	12,197.50	11,437.87	26.06	37.71	-28.41	-160.35	-947.59	698.95	639.89	59.06	11.835	
12,700.00	12,048.46	12,291.28	11,437.63	27.87	39.03	-27.95	-154.85	-1,041.21	694.46	634.32	60.14	11.547	
12,800.00	12,046.99	12,383.08	11,436.18	29.77	40.39	-27.50	-150.04	-1,132.88	691.46	630.25	61.21	11.296	
12,900.00	12,045.53	12,484.06	11,434.08	31.75	41.98	-27.00	-144.96	-1,233.70	689.04	626.62	62.42	11.039	
13,000.00	12,044.07	12,584.06	11,433.24	33.80	43.66	-26.69	-141.95	-1,333.65	686.48	622.76	63.72	10.773	
13,100.00	12,042.60	12,683.78	11,434.19	35.89	45.42	-26.71	-142.43	-1,433.35	683.90	618.70	65.20	10.490	
13,200.00	12,041.14	12,771.00	11,435.31	38.03	46.99	-26.88	-144.80	-1,520.54	682.06	615.45	66.62	10.239	
13,297.34	12,039.72	12,865.00	11,435.64	40.14	48.72	-27.10	-148.17	-1,614.47	681.45	613.23	68.22	9.988	
13,300.00	12,039.68	12,865.00	11,435.64	40.20	48.72	-27.10	-148.17	-1,614.47	681.45	613.22	68.23	9.988	
13,400.00	12,038.22	12,958.00	11,434.74	42.40	50.47	-27.31	-152.08	-1,707.39	682.26	612.37	69.90	9.761	
13,500.00	12,036.75	13,042.02	11,432.81	44.63	52.08	-27.54	-156.74	-1,791.26	684.88	613.38	71.50	9.579	
13,600.00	12,035.29	13,130.18	11,429.37	46.87	53.80	-27.78	-162.42	-1,879.16	689.37	616.12	73.24	9.412	
13,700.00	12,033.83	13,236.39	11,423.72	49.14	55.92	-27.90	-167.71	-1,985.09	694.45	619.14	75.31	9.221	
13,800.00	12,032.36	13,365.52	11,418.37	51.42	58.58	-27.80	-169.99	-2,114.08	697.03	619.36	77.68	8.973	
13,900.00	12,030.90	13,478.77	11,418.16	53.72	60.93	-27.78	-170.62	-2,227.32	695.39	615.53	79.86	8.707	
14,000.00	12,029.44	13,574.16	11,417.79	56.02	62.93	-27.79	-171.47	-2,322.71	694.19	612.38	81.80	8.486	
14,100.00	12,027.98	13,667.22	11,417.31	58.34	64.91	-27.84	-173.10	-2,415.74	693.51	609.72	83.79	8.277	
14,100.73	12,027.97	13,667.87	11,417.30	58.36	64.92	-27.84	-173.11	-2,416.40	693.51	609.70	83.80	8.276	
14,200.00	12,026.51	13,769.58	11,415.50	60.67	67.11	-27.82	-174.49	-2,518.08	693.75	607.86	85.89	8.078	
14,300.00	12,025.05	13,876.11	11,413.95	63.01	69.42	-27.67	-173.88	-2,624.60	692.80	604.88	87.92	7.880	
14,400.00	12,023.59	13,967.85	11,412.89	65.35	71.43	-27.59	-174.02	-2,716.33	691.95	602.12	89.83	7.703	
14,406.30	12,023.50	13,973.47	11,412.79	65.50	71.55	-27.59	-174.06	-2,721.94	691.95	602.00	89.95	7.693	
14,500.00	12,022.12	14,068.77	11,411.57	67.70	73.65	-27.62	-175.82	-2,817.22	691.98	599.94	92.04	7.519	
14,536.83	12,021.59	14,104.01	11,411.50	68.57	74.43	-27.69	-177.03	-2,852.44	691.91	599.01	92.90	7.448	

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

FLAT CREEK
RESOURCES

Anticollision Report

Company:	Flat Creek Resources, LLC	Local Co-ordinate Reference:	Well Phantom Bank 31 Fed Com No. 511H
Project:	Eddy County, New Mexico NAD27 NME	TVD Reference:	RKB=3129+25 @ 3154.00ft
Reference Site:	Phantom Bank 31 Fed Com	MD Reference:	RKB=3129+25 @ 3154.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Phantom Bank 31 Fed Com No. 511H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev2	Offset TVD Reference:	Offset Datum

Offset Design: Phantom Bank 31 Fed Com - Phantom Bank 31 Fed Com No. 502H - Original Hole - Surveys Original Hole											Offset Site Error:	0.00 ft
Survey Program: 220-MWD											Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Rule Assigned:	
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
14,600.00	12,020.66	14,161.95	11,411.01	70.06	75.71	-27.79	-179.01	-2,910.34	692.15	597.83	94.32	7.338
14,700.00	12,019.20	14,280.99	11,411.23	72.42	78.36	-28.04	-183.01	-3,029.30	691.60	594.43	97.17	7.118
14,800.00	12,017.74	14,376.24	11,413.06	74.79	80.49	-28.35	-186.95	-3,124.46	689.91	590.10	99.80	6.913
14,888.58	12,016.44	14,456.00	11,414.06	76.89	82.27	-28.64	-190.97	-3,204.11	689.32	587.19	102.12	6.750
14,900.00	12,016.27	14,466.02	11,414.12	77.16	82.50	-28.68	-191.51	-3,214.11	689.32	586.91	102.42	6.730
15,000.00	12,014.81	14,549.00	11,413.92	79.54	84.36	-29.01	-196.66	-3,296.93	690.60	585.65	104.95	6.580
15,100.00	12,013.35	14,643.00	11,411.72	81.92	86.48	-29.30	-202.41	-3,390.73	693.66	586.00	107.66	6.443
15,200.00	12,011.88	14,752.32	11,407.74	84.30	88.97	-29.37	-206.35	-3,499.90	696.62	586.25	110.37	6.312
15,300.00	12,010.42	14,859.47	11,404.32	86.69	91.42	-29.34	-208.48	-3,606.97	698.41	585.54	112.87	6.188
15,400.00	12,008.96	14,961.28	11,402.69	89.07	93.76	-29.41	-210.99	-3,708.74	699.04	583.58	115.46	6.054
15,500.00	12,007.50	15,053.38	11,400.39	91.47	95.87	-29.48	-213.81	-3,800.76	700.72	582.82	117.90	5.943
15,600.00	12,006.03	15,149.62	11,396.69	93.86	98.09	-29.40	-215.37	-3,896.92	702.89	582.74	120.14	5.850
15,700.00	12,004.57	15,270.21	11,391.02	96.26	100.88	-29.13	-215.47	-4,017.37	705.27	582.80	122.47	5.759
15,800.00	12,003.11	15,386.98	11,391.19	98.66	103.58	-29.09	-215.64	-4,134.13	703.16	578.02	125.14	5.619
15,900.00	12,001.64	15,481.64	11,392.41	101.06	105.78	-29.20	-217.04	-4,228.78	700.78	573.00	127.78	5.484
16,000.00	12,000.18	15,573.87	11,393.04	103.46	107.93	-29.34	-219.24	-4,320.97	699.37	568.90	130.47	5.360
16,100.00	11,998.72	15,667.82	11,392.84	105.86	110.12	-29.48	-221.91	-4,414.88	698.97	565.76	133.21	5.247
16,147.88	11,998.02	15,753.43	11,394.52	107.02	112.12	-29.66	-223.96	-4,500.44	697.85	562.56	135.29	5.158
16,200.00	11,997.26	15,809.64	11,397.85	108.27	113.43	-29.86	-225.18	-4,556.54	694.67	557.56	137.11	5.066
16,300.00	11,995.79	15,895.49	11,402.26	110.68	115.44	-30.14	-227.03	-4,642.25	689.37	549.12	140.25	4.915
16,400.00	11,994.33	15,975.98	11,403.05	113.09	117.32	-30.22	-228.06	-4,722.72	687.12	544.32	142.80	4.812
16,500.00	11,992.87	16,070.76	11,401.57	115.50	119.55	-30.09	-227.72	-4,817.49	686.31	541.28	145.03	4.732
16,524.36	11,992.51	16,092.79	11,401.00	116.08	120.07	-30.04	-227.54	-4,839.51	686.27	540.76	145.51	4.716
16,600.00	11,991.41	16,160.68	11,398.78	117.91	121.67	-29.89	-227.11	-4,907.36	686.68	539.73	146.95	4.673
16,700.00	11,989.94	16,249.19	11,394.94	120.32	123.75	-29.72	-227.48	-4,995.79	688.67	539.80	148.87	4.626
16,800.00	11,988.48	16,340.29	11,389.80	122.73	125.90	-29.55	-228.57	-5,086.73	692.18	541.39	150.80	4.590
16,900.00	11,987.02	16,437.98	11,383.85	125.15	128.20	-29.39	-230.29	-5,184.23	696.37	543.49	152.88	4.555
17,000.00	11,985.55	16,535.31	11,377.51	127.56	130.49	-29.26	-232.61	-5,281.32	701.24	546.21	155.03	4.523
17,100.00	11,984.09	16,645.85	11,372.43	129.98	133.10	-29.26	-236.13	-5,391.69	704.79	546.93	157.86	4.465
17,175.07	11,982.99	16,715.88	11,369.84	131.79	134.75	-29.36	-239.50	-5,461.59	707.50	547.52	159.99	4.422

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

FLAT CREEK
RESOURCES

Anticollision Report

Company:	Flat Creek Resources, LLC	Local Co-ordinate Reference:	Well Phantom Bank 31 Fed Com No. 511H
Project:	Eddy County, New Mexico NAD27 NME	TVD Reference:	RKB=3129+25 @ 3154.00ft
Reference Site:	Phantom Bank 31 Fed Com	MD Reference:	RKB=3129+25 @ 3154.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Phantom Bank 31 Fed Com No. 511H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev2	Offset TVD Reference:	Offset Datum

Offset Design: Phantom Bank 31 Fed Com - Phantom Bank 31 Fed Com No. 504H - Original Hole - Surveys Original Hole												Offset Site Error:	0.00 ft
Survey Program: 312-MWD												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 (°)	Offset Wellbore Centre +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	0.00	179.59	-902.80	6.53	902.90				
100.00	100.00	86.90	86.90	0.43	0.80	179.59	-902.88	6.48	902.90	901.67	1.23	733.036	
200.00	200.00	185.09	185.09	1.25	1.71	179.60	-903.15	6.31	903.18	900.22	2.96	304.821	
300.00	300.00	283.27	283.27	1.75	2.62	179.62	-903.62	6.02	903.66	899.30	4.36	207.032	
400.00	400.00	387.49	387.49	2.13	3.33	179.65	-904.09	5.53	904.10	898.65	5.45	165.880	
500.00	500.00	494.21	494.20	2.46	3.95	179.70	-903.81	4.68	903.84	897.45	6.39	141.385	
600.00	600.00	604.45	604.42	2.75	4.23	179.78	-902.46	3.52	902.60	895.66	6.94	130.059	
700.00	700.00	706.85	706.80	3.02	4.63	179.84	-900.52	2.47	900.71	893.11	7.60	118.532	
800.00	800.00	809.30	809.22	3.27	5.01	179.90	-898.30	1.60	898.54	890.33	8.21	109.434	
900.00	900.00	911.88	911.77	3.50	5.32	179.92	-895.78	1.19	896.09	887.35	8.74	102.541	
1,000.00	1,000.00	1,006.00	1,005.87	3.72	5.64	179.95	-893.65	0.76	893.82	884.54	9.27	96.401	
1,100.00	1,100.00	1,100.60	1,100.45	3.92	5.98	-179.98	-892.12	-0.27	892.20	882.40	9.80	91.024	
1,200.00	1,200.00	1,198.15	1,197.98	4.12	6.38	-179.90	-890.94	-1.60	891.00	880.63	10.37	85.920	
1,300.00	1,300.00	1,296.74	1,296.56	4.31	6.78	-179.81	-890.01	-2.96	890.06	879.13	10.93	81.427	
1,400.00	1,400.00	1,398.76	1,398.57	4.50	7.18	-179.72	-888.97	-4.30	889.04	877.55	11.49	77.405	
1,500.00	1,500.00	1,499.20	1,498.99	4.68	7.57	-179.65	-887.75	-5.49	887.83	875.81	12.02	73.866	
1,600.00	1,600.00	1,597.16	1,596.94	4.85	7.94	-179.57	-886.69	-6.70	886.76	874.23	12.53	70.799	
1,700.00	1,700.00	1,693.93	1,693.69	5.02	8.28	-179.48	-885.90	-8.00	885.95	872.96	12.99	68.181	
1,800.00	1,800.00	1,789.38	1,789.13	5.19	8.60	-179.37	-885.57	-9.69	885.63	872.20	13.42	65.972	
1,813.77	1,813.77	1,802.53	1,802.27	5.21	8.65	-179.36	-885.56	-9.96	885.62	872.14	13.48	65.684	
1,900.00	1,900.00	1,883.61	1,883.34	5.35	8.87	-179.25	-885.76	-11.63	885.85	872.05	13.80	64.185	
2,000.00	2,000.00	1,976.79	1,976.51	5.50	9.08	-179.17	-886.64	-12.90	886.82	872.68	14.13	62.751	
2,100.00	2,099.99	2,071.50	2,071.20	5.65	9.29	135.89	-888.24	-13.53	889.13	874.67	14.46	61.480	
2,200.00	2,199.96	2,167.58	2,167.25	5.81	9.50	136.03	-890.30	-14.30	893.18	878.37	14.80	60.329	
2,300.00	2,299.86	2,266.61	2,266.25	5.98	9.73	136.24	-892.74	-15.31	898.81	883.64	15.17	59.264	
2,400.00	2,399.73	2,367.85	2,367.46	6.17	9.97	136.54	-895.12	-16.43	904.98	889.43	15.54	58.219	
2,500.00	2,499.59	2,469.18	2,468.76	6.37	10.21	136.84	-897.33	-17.54	911.00	895.06	15.94	57.168	
2,600.00	2,599.45	2,570.58	2,570.13	6.58	10.45	137.12	-899.36	-18.47	916.86	900.52	16.34	56.127	
2,700.00	2,699.31	2,671.15	2,670.68	6.80	10.69	137.38	-901.23	-19.22	922.60	905.85	16.75	55.096	
2,800.00	2,799.18	2,771.70	2,771.21	7.04	10.93	137.63	-903.04	-19.81	928.28	911.12	17.16	54.103	
2,900.00	2,899.04	2,874.35	2,873.85	7.28	11.17	137.90	-904.66	-20.65	933.77	916.20	17.57	53.132	
3,000.00	2,998.90	2,976.21	2,975.69	7.53	11.42	138.20	-905.94	-22.04	938.99	921.00	18.00	52.177	
3,100.00	3,098.77	3,075.08	3,074.54	7.78	11.64	138.47	-907.16	-23.02	944.20	925.80	18.41	51.297	
3,200.00	3,198.63	3,173.24	3,172.70	8.05	11.84	138.68	-908.54	-23.17	949.54	930.72	18.82	50.453	
3,300.00	3,298.53	3,269.82	3,269.25	8.31	11.98	138.82	-910.24	-22.28	954.51	935.28	19.23	49.644	
3,400.00	3,398.50	3,363.73	3,363.13	8.55	12.12	138.82	-912.32	-20.36	958.56	938.95	19.62	48.863	
3,500.00	3,498.49	3,452.92	3,452.23	8.72	12.25	-176.29	-915.22	-17.73	962.27	942.32	19.95	48.231	
3,600.00	3,598.49	3,547.85	3,546.99	8.83	12.38	-176.52	-919.35	-14.17	966.37	946.11	20.26	47.706	
3,700.00	3,698.49	3,658.65	3,657.63	8.93	12.54	-176.79	-923.58	-9.85	969.95	949.35	20.60	47.079	
3,800.00	3,798.49	3,776.29	3,775.15	9.04	12.67	-177.06	-926.45	-5.48	972.22	951.29	20.93	46.460	
3,900.00	3,898.49	3,898.87	3,897.67	9.14	12.80	-177.29	-926.72	-1.58	972.28	951.05	21.23	45.801	
4,000.00	3,998.49	3,999.42	3,998.18	9.24	12.90	-177.44	-925.77	1.09	971.21	949.73	21.48	45.217	
4,100.00	4,098.49	4,101.97	4,100.70	9.35	13.00	-177.57	-924.59	3.35	969.97	948.24	21.73	44.640	
4,200.00	4,198.49	4,208.31	4,207.01	9.45	13.11	-177.66	-922.80	4.95	968.23	946.26	21.96	44.084	
4,300.00	4,298.49	4,316.06	4,314.72	9.55	13.23	-177.71	-920.22	5.81	965.80	943.59	22.21	43.494	
4,400.00	4,398.49	4,425.49	4,424.09	9.65	13.37	-177.75	-916.57	6.62	962.43	939.98	22.45	42.861	
4,500.00	4,498.49	4,527.34	4,525.85	9.75	13.50	-177.78	-912.46	7.38	958.37	935.67	22.70	42.217	
4,600.00	4,598.49	4,626.42	4,624.85	9.86	13.64	-177.81	-908.50	7.90	954.36	931.42	22.95	41.589	
4,700.00	4,698.49	4,724.34	4,722.70	9.96	13.79	-177.81	-904.72	8.14	950.49	927.29	23.20	40.965	
4,800.00	4,798.49	4,822.09	4,820.38	10.06	13.94	-177.80	-901.15	8.03	946.85	923.39	23.46	40.361	
4,900.00	4,898.49	4,927.10	4,925.32	10.16	14.11	-177.78	-897.18	7.83	943.08	919.34	23.73	39.735	
5,000.00	4,998.49	5,031.03	5,029.15	10.26	14.29	-177.77	-892.67	7.89	938.74	914.73	24.01	39.097	

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

FLAT CREEK
RESOURCES

Anticollision Report

Company:	Flat Creek Resources, LLC	Local Co-ordinate Reference:	Well Phantom Bank 31 Fed Com No. 511H
Project:	Eddy County, New Mexico NAD27 NME	TVD Reference:	RKB=3129+25 @ 3154.00ft
Reference Site:	Phantom Bank 31 Fed Com	MD Reference:	RKB=3129+25 @ 3154.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Phantom Bank 31 Fed Com No. 511H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev2	Offset TVD Reference:	Offset Datum

Offset Design:		Phantom Bank 31 Fed Com - Phantom Bank 31 Fed Com No. 504H - Original Hole - Surveys Original Hole											Offset Site Error:		0.00 ft				
Survey Program:		312-MWD		Offset			Semi Major Axis		Highside		Offset Wellbore Centre		Rule Assigned:				Offset Well Error:		0.00 ft
Reference	Offset	Reference	Offset	Reference	Offset	Highside	Offset	Reference	Offset	Reference	Offset	Reference	Offset	Reference	Offset	Reference	Offset	Reference	Offset
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)
5,100.00	5,098.47	5,128.62	5,126.65	5,200.00	5,198.33	5,225.37	5,223.32	5,278.76	5,276.85	5,299.68	5,297.58	5,300.00	5,297.97	5,319.68	5,317.57	5,400.00	5,397.52	5,419.25	5,417.09
5,500.00	5,497.07	5,533.47	5,531.21	5,600.00	5,596.63	5,635.40	5,632.99	5,700.00	5,696.18	5,730.35	5,727.83	5,795.15	5,790.90	5,820.19	5,817.58	5,800.00	5,795.74	5,824.76	5,822.15
5,900.00	5,895.29	5,918.94	5,916.26	6,000.00	5,994.84	6,022.15	6,019.41	6,100.00	6,094.40	6,129.64	6,126.79	6,192.03	6,186.01	6,218.82	6,215.85	6,200.00	6,193.95	6,226.48	6,223.50
6,300.00	6,293.50	6,323.00	6,319.93	6,400.00	6,393.06	6,420.13	6,416.97	6,500.00	6,492.61	6,518.01	6,514.75	6,600.00	6,592.17	6,621.80	6,618.44	6,700.00	6,691.72	6,724.61	6,721.15
6,800.00	6,791.27	6,824.22	6,820.66	6,900.00	6,890.83	6,923.39	6,919.73	7,000.00	6,990.38	7,021.91	7,018.16	7,100.00	7,089.93	7,118.79	7,114.96	7,200.00	7,189.49	7,213.90	7,210.01
7,300.00	7,289.10	7,317.55	7,313.60	7,400.00	7,388.93	7,429.13	7,425.06	7,500.00	7,488.91	7,526.83	7,522.63	7,600.00	7,588.91	7,621.89	7,617.60	7,700.00	7,688.91	7,716.98	7,712.60
7,800.00	7,788.91	7,812.10	7,807.67	7,900.00	7,888.91	7,907.61	7,903.13	8,000.00	7,988.91	8,003.18	7,998.66	8,100.00	8,088.91	8,106.18	8,101.63	8,200.00	8,188.91	8,209.87	8,205.28
8,300.00	8,288.91	8,314.98	8,310.33	8,400.00	8,388.91	8,417.76	8,413.02	8,500.00	8,488.91	8,516.18	8,511.37	8,600.00	8,588.91	8,616.90	8,612.02	8,700.00	8,688.91	8,720.47	8,715.50
8,800.00	8,788.91	8,822.55	8,817.48	8,900.00	8,888.91	8,923.78	8,918.61	9,000.00	8,988.91	9,020.05	9,014.77	9,100.00	9,088.91	9,114.95	9,109.61	9,200.00	9,188.91	9,217.51	9,212.09
9,300.00	9,288.91	9,321.92	9,316.39	9,400.00	9,388.91	9,405.97	9,400.36	9,500.00	9,488.91	9,490.25	9,484.59	9,600.00	9,588.91	9,584.30	9,578.58	9,634.56	9,623.47	9,617.71	9,611.97
9,700.00	9,688.91	9,680.95	9,675.17	9,800.00	9,788.91	9,779.07	9,773.23												
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CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



FLAT CREEK
RESOURCES

Anticollision Report

Company:	Flat Creek Resources, LLC	Local Co-ordinate Reference:	Well Phantom Bank 31 Fed Com No. 511H
Project:	Eddy County, New Mexico NAD27 NME	TVD Reference:	RKB=3129+25 @ 3154.00ft
Reference Site:	Phantom Bank 31 Fed Com	MD Reference:	RKB=3129+25 @ 3154.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Phantom Bank 31 Fed Com No. 511H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev2	Offset TVD Reference:	Offset Datum

Offset Design: Phantom Bank 31 Fed Com - Phantom Bank 31 Fed Com No. 504H - Original Hole - Surveys Original Hole													Offset Site Error: 0.00 ft			
Survey Program: 312-MWD				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			
9,900.00	9,888.91	9,877.48	9,871.60	16.44	25.25	170.88	-721.54	-11.33	863.63	822.39	41.24	20.941				
10,000.00	9,988.91	9,968.11	9,962.20	16.52	25.26	171.03	-722.95	-13.36	864.82	823.51	41.30	20.939				
10,100.00	10,088.91	10,058.23	10,052.26	16.59	25.27	171.19	-725.41	-15.51	867.15	825.79	41.36	20.966				
10,200.00	10,188.91	10,157.72	10,151.66	16.67	25.26	171.39	-728.83	-18.06	870.15	828.75	41.40	21.019				
10,300.00	10,288.91	10,258.76	10,252.60	16.74	25.24	171.61	-732.21	-20.88	873.05	831.62	41.43	21.072				
10,400.00	10,388.91	10,359.60	10,353.31	16.82	25.24	171.88	-735.59	-24.56	875.85	834.37	41.47	21.118				
10,500.00	10,488.91	10,496.35	10,489.38	16.89	25.56	172.66	-739.37	-36.17	877.78	835.98	41.81	20.996				
10,600.00	10,588.91	10,642.80	10,629.19	16.97	26.74	175.42	-737.12	-78.64	872.59	830.09	42.50	20.534				
10,700.00	10,688.91	10,732.77	10,709.01	17.05	27.46	178.13	-736.06	-119.97	868.24	825.70	42.54	20.410				
10,800.00	10,788.91	10,829.51	10,787.51	17.12	28.24	-178.14	-733.48	-176.29	865.15	822.67	42.47	20.369				
10,822.29	10,811.19	10,845.51	10,799.70	17.14	28.40	-177.45	-733.01	-186.66	865.02	822.56	42.45	20.376				
10,900.00	10,888.91	10,942.88	10,867.61	17.20	29.05	-172.85	-728.28	-256.04	866.22	823.85	42.37	20.446				
11,000.00	10,988.91	11,000.80	10,901.48	17.27	29.19	-169.75	-722.81	-302.68	871.13	828.75	42.39	20.552				
11,100.00	11,088.91	11,048.43	10,926.58	17.35	29.31	-167.09	-717.73	-342.83	883.87	841.31	42.56	20.768				
11,200.00	11,188.91	11,082.00	10,942.23	17.43	29.40	-165.15	-714.09	-372.30	905.50	862.62	42.88	21.115				
11,300.00	11,288.91	11,099.75	10,949.75	17.50	29.44	-164.11	-712.26	-388.27	936.12	892.77	43.35	21.595				
11,400.00	11,388.91	11,129.00	10,961.15	17.58	29.53	-162.39	-709.61	-415.07	975.37	931.43	43.94	22.196				
11,500.00	11,488.90	11,129.00	10,961.15	17.65	29.53	-77.98	-709.61	-415.07	1,022.04	977.51	44.53	22.949				
11,600.00	11,588.21	11,154.65	10,970.14	17.97	29.60	-70.82	-707.62	-439.01	1,073.25	1,028.03	45.23	23.731				
11,700.00	11,684.17	11,176.00	10,976.94	18.46	29.66	-64.20	-706.15	-459.19	1,125.38	1,079.45	45.93	24.500				
11,800.00	11,773.87	11,207.66	10,985.84	18.98	29.76	-57.91	-704.19	-489.52	1,176.03	1,129.35	46.68	25.193				
11,900.00	11,854.58	11,241.63	10,993.81	19.49	29.88	-52.60	-702.27	-522.47	1,223.19	1,175.78	47.41	25.799				
12,000.00	11,923.84	11,290.24	11,003.16	19.96	30.08	-48.15	-699.81	-570.11	1,264.91	1,216.71	48.20	26.245				
12,100.00	11,979.56	11,362.00	11,016.14	20.39	30.48	-44.67	-696.51	-640.61	1,297.82	1,248.76	49.06	26.454				
12,200.00	12,020.29	11,409.00	11,024.02	20.88	30.82	-42.20	-695.30	-686.92	1,320.20	1,270.38	49.82	26.502				
12,300.00	12,044.96	11,456.00	11,029.45	21.68	31.24	-40.97	-695.25	-733.60	1,332.36	1,281.66	50.70	26.280				
12,400.00	12,052.83	11,489.09	11,031.31	22.89	31.57	-40.74	-695.25	-766.63	1,333.72	1,282.17	51.55	25.874				
12,500.00	12,051.38	11,569.90	11,032.42	24.38	32.50	-40.76	-694.64	-847.43	1,330.05	1,277.26	52.79	25.196				
12,600.00	12,049.92	11,668.26	11,033.21	26.06	33.80	-40.74	-693.60	-945.78	1,326.72	1,272.52	54.19	24.482				
12,700.00	12,048.46	11,769.39	11,032.98	27.87	35.31	-40.66	-691.54	-1,046.89	1,323.51	1,267.73	55.78	23.726				
12,800.00	12,046.99	11,870.19	11,032.79	29.77	36.95	-40.56	-688.95	-1,147.66	1,319.93	1,262.42	57.52	22.948				
12,900.00	12,045.53	11,963.33	11,031.76	31.75	38.54	-40.44	-686.26	-1,240.75	1,316.86	1,257.58	59.28	22.215				
13,000.00	12,044.07	12,055.82	11,029.87	33.80	40.22	-40.27	-683.05	-1,333.16	1,314.13	1,253.00	61.13	21.496				
13,100.00	12,042.60	12,139.58	11,029.46	35.89	41.80	-40.25	-682.94	-1,416.92	1,312.38	1,249.37	63.02	20.826				
13,200.00	12,041.14	12,224.99	11,028.23	38.03	43.45	-40.24	-683.71	-1,502.31	1,312.00	1,247.00	65.01	20.183				
13,241.37	12,040.54	12,267.96	11,027.64	38.93	44.28	-40.24	-684.35	-1,545.28	1,311.99	1,246.02	65.97	19.888				
13,300.00	12,039.68	12,329.64	11,027.15	40.20	45.49	-40.26	-685.54	-1,606.95	1,311.87	1,244.50	67.37	19.473				
13,400.00	12,038.22	12,437.86	11,026.02	42.40	47.66	-40.26	-686.60	-1,715.15	1,311.27	1,241.41	69.87	18.768				
13,500.00	12,036.75	12,543.98	11,024.87	44.63	49.83	-40.22	-686.54	-1,821.27	1,310.02	1,237.62	72.39	18.096				
13,600.00	12,035.29	12,645.56	11,024.29	46.87	51.94	-40.20	-686.71	-1,922.84	1,308.52	1,233.59	74.93	17.464				
13,700.00	12,033.83	12,733.28	11,023.29	49.14	53.79	-40.16	-686.65	-2,010.56	1,307.32	1,230.04	77.28	16.917				
13,800.00	12,032.36	12,825.74	11,021.86	51.42	55.77	-40.15	-687.63	-2,103.00	1,307.13	1,227.36	79.77	16.387				
13,813.83	12,032.16	12,839.22	11,021.65	51.74	56.06	-40.15	-687.80	-2,116.48	1,307.12	1,227.00	80.13	16.313				
13,900.00	12,030.90	12,917.62	11,020.55	53.72	57.75	-40.16	-689.28	-2,194.86	1,307.34	1,225.03	82.32	15.882				
14,000.00	12,029.44	13,010.97	11,019.80	56.02	59.78	-40.25	-692.66	-2,288.14	1,308.25	1,223.25	85.00	15.390				
14,100.00	12,027.98	13,110.77	11,019.70	58.34	61.96	-40.40	-697.49	-2,387.82	1,309.42	1,221.49	87.93	14.892				
14,200.00	12,026.51	13,211.04	11,020.35	60.67	64.17	-40.60	-703.11	-2,487.93	1,310.52	1,219.55	90.96	14.407				
14,300.00	12,025.05	13,317.26	11,020.56	63.01	66.53	-40.77	-708.18	-2,594.02	1,311.45	1,217.30	94.15	13.929				
14,400.00	12,023.59	13,438.47	11,019.43	65.35	69.27	-40.80	-710.19	-2,715.21	1,311.17	1,213.65	97.52	13.445				
14,500.00	12,022.12	13,536.25	11,017.25	67.70	71.49	-40.70	-709.36	-2,812.95	1,310.26	1,209.94	100.33	13.060				
14,600.00	12,020.66	13,630.49	11,014.03	70.06	73.63	-40.55	-707.63	-2,907.13	1,309.63	1,206.63	103.00	12.715				
14,642.09	12,020.05	13,667.89	11,012.66	71.05	74.48	-40.49	-707.11	-2,944.50	1,309.55	1,205.47	104.08	12.582				

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



FLAT CREEK
RESOURCES

Anticollision Report

Company:	Flat Creek Resources, LLC	Local Co-ordinate Reference:	Well Phantom Bank 31 Fed Com No. 511H
Project:	Eddy County, New Mexico NAD27 NME	TVD Reference:	RKB=3129+25 @ 3154.00ft
Reference Site:	Phantom Bank 31 Fed Com	MD Reference:	RKB=3129+25 @ 3154.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Phantom Bank 31 Fed Com No. 511H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev2	Offset TVD Reference:	Offset Datum

Offset Design: Phantom Bank 31 Fed Com - Phantom Bank 31 Fed Com No. 504H - Original Hole - Surveys Original Hole												Offset Site Error:	0.00 ft
Survey Program: 312-MWD												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 (ft)	Factor	
14,700.00	12,019.20	13,720.18	11,010.76	72.42	75.67	-40.42	-706.72	-2,996.75	1,309.69	1,204.08	105.61	12.402	
14,800.00	12,017.74	13,814.26	11,007.63	74.79	77.82	-40.33	-707.01	-3,090.78	1,310.38	1,202.01	108.37	12.092	
14,900.00	12,016.27	13,909.93	11,004.57	77.16	80.01	-40.27	-707.84	-3,186.39	1,311.35	1,200.15	111.20	11.793	
15,000.00	12,014.81	14,008.84	11,000.79	79.54	82.29	-40.20	-709.08	-3,285.23	1,313.03	1,198.93	114.10	11.508	
15,100.00	12,013.35	14,185.41	10,998.28	81.92	86.38	-40.05	-707.20	-3,461.74	1,311.37	1,192.98	118.38	11.077	
15,200.00	12,011.88	14,265.00	10,999.05	84.30	88.23	-40.02	-705.87	-3,541.32	1,307.53	1,186.48	121.05	10.802	
15,300.00	12,010.42	14,342.54	10,998.79	86.69	90.04	-39.98	-705.00	-3,618.85	1,305.11	1,181.47	123.64	10.556	
15,390.79	12,009.09	14,416.88	10,996.78	88.85	91.77	-39.90	-704.38	-3,693.16	1,304.63	1,178.66	125.97	10.357	
15,400.00	12,008.96	14,424.79	10,996.53	89.07	91.96	-39.89	-704.33	-3,701.06	1,304.64	1,178.43	126.21	10.337	
15,500.00	12,007.50	14,514.83	10,993.47	91.47	94.06	-39.79	-704.29	-3,791.05	1,305.17	1,176.25	128.92	10.124	
15,600.00	12,006.03	14,611.21	10,990.81	93.86	96.32	-39.76	-705.78	-3,887.38	1,306.23	1,174.36	131.88	9.905	
15,700.00	12,004.57	14,702.56	10,988.58	96.26	98.45	-39.77	-707.98	-3,978.68	1,307.63	1,172.83	134.80	9.700	
15,800.00	12,003.11	14,811.53	10,985.91	98.66	101.01	-39.79	-711.19	-4,087.56	1,309.37	1,171.21	138.16	9.477	
15,900.00	12,001.64	14,952.73	10,984.07	101.06	104.34	-39.76	-712.03	-4,228.74	1,308.63	1,166.56	142.06	9.211	
16,000.00	12,000.18	15,055.81	10,984.64	103.46	106.78	-39.78	-712.45	-4,331.82	1,306.42	1,161.11	145.31	8.990	
16,100.00	11,998.72	15,152.91	10,985.62	105.86	109.07	-39.83	-713.37	-4,428.91	1,304.22	1,155.70	148.52	8.781	
16,200.00	11,997.26	15,249.39	10,986.78	108.27	111.35	-39.91	-715.03	-4,525.37	1,302.35	1,150.55	151.80	8.580	
16,300.00	11,995.79	15,344.48	10,988.47	110.68	113.60	-40.04	-717.61	-4,620.41	1,300.70	1,145.53	155.17	8.382	
16,400.00	11,994.33	15,441.20	10,989.82	113.09	115.89	-40.17	-720.51	-4,717.07	1,299.52	1,140.92	158.60	8.194	
16,500.00	11,992.87	15,538.40	10,989.63	115.50	118.20	-40.20	-721.72	-4,814.27	1,298.43	1,136.61	161.82	8.024	
16,584.44	11,991.63	15,610.83	10,989.47	117.53	119.92	-40.24	-723.13	-4,886.68	1,297.92	1,133.55	164.37	7.896	
16,600.00	11,991.41	15,622.96	10,989.33	117.91	120.21	-40.24	-723.36	-4,898.81	1,297.94	1,133.13	164.81	7.875	
16,700.00	11,989.94	15,709.84	10,987.01	120.32	122.27	-40.22	-724.73	-4,985.65	1,298.92	1,131.25	167.67	7.747	
16,800.00	11,988.48	15,805.42	10,983.08	122.73	124.54	-40.11	-725.09	-5,081.14	1,300.26	1,129.75	170.51	7.626	
16,900.00	11,987.02	15,900.39	10,979.01	125.15	126.80	-40.02	-726.09	-5,176.02	1,302.18	1,128.80	173.38	7.511	
17,000.00	11,985.55	16,040.56	10,974.50	127.56	130.14	-39.93	-727.31	-5,316.10	1,303.38	1,126.16	177.21	7.355	
17,100.00	11,984.09	16,138.00	10,973.00	129.98	132.47	-39.86	-726.92	-5,413.53	1,302.26	1,122.05	180.21	7.226	
17,175.07	11,982.99	16,203.82	10,971.68	131.79	134.04	-39.82	-726.81	-5,479.34	1,301.81	1,119.50	182.31	7.141 SF	

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

FLAT CREEK
RESOURCES

Anticollision Report

Company:	Flat Creek Resources, LLC	Local Co-ordinate Reference:	Well Phantom Bank 31 Fed Com No. 511H
Project:	Eddy County, New Mexico NAD27 NME	TVD Reference:	RKB=3129+25 @ 3154.00ft
Reference Site:	Phantom Bank 31 Fed Com	MD Reference:	RKB=3129+25 @ 3154.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Phantom Bank 31 Fed Com No. 511H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev2	Offset TVD Reference:	Offset Datum

Offset Design: Phantom Bank 31 Fed Com - Phantom Bank 31 Fed Com No. 506H - Original Hole - Surveys Original Hole												Offset Site Error:	0.00 ft
Survey Program: 220-MWD												Offset Well Error:	0.00 ft
Rule Assigned:												Warning	
Measured Depth (ft)	Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.00	0.00	7.57	7.57	0.00	0.05	-0.14	131.78	-0.31	131.78				
100.00	100.00	108.57	108.57	0.43	0.72	-0.18	131.34	-0.41	131.34	130.20	1.15	114.703	
200.00	200.00	209.55	209.55	1.25	1.38	-0.30	130.13	-0.68	130.15	127.51	2.63	49.397	
300.00	300.00	309.29	309.27	1.75	2.32	-0.42	128.61	-0.95	128.63	124.56	4.07	31.630	
400.00	400.00	408.92	408.89	2.13	3.28	-0.44	127.39	-0.99	127.40	121.98	5.41	23.529	
500.00	500.00	509.51	509.47	2.46	3.91	-0.37	126.06	-0.82	126.07	119.70	6.37	19.786	
600.00	600.00	609.91	609.85	2.75	4.51	-0.22	124.26	-0.47	124.29	117.02	7.27	17.102	
700.00	700.00	709.48	709.40	3.02	5.00	0.13	122.55	0.29	122.56	114.54	8.02	15.275	
800.00	800.00	808.64	808.55	3.27	5.43	0.73	121.22	1.54	121.24	112.55	8.69	13.957	
858.69	858.69	866.29	866.19	3.40	5.58	1.10	120.96	2.33	120.98	112.02	8.96	13.495	
900.00	900.00	906.86	906.76	3.50	5.68	1.37	121.07	2.89	121.11	111.95	9.16	13.221	
1,000.00	1,000.00	1,006.99	1,006.88	3.72	5.89	2.01	121.82	4.27	121.90	112.34	9.56	12.754	
1,100.00	1,100.00	1,107.54	1,107.41	3.92	6.15	2.68	121.98	5.71	122.12	112.12	10.00	12.218	
1,200.00	1,200.00	1,207.76	1,207.63	4.12	6.48	3.30	121.90	7.03	122.10	111.61	10.49	11.639	
1,300.00	1,300.00	1,308.34	1,308.20	4.31	6.85	3.89	121.53	8.26	121.81	110.80	11.01	11.065	
1,400.00	1,400.00	1,409.10	1,408.95	4.50	7.23	4.51	120.54	9.51	120.93	109.39	11.53	10.485	
1,500.00	1,500.00	1,509.58	1,509.40	4.68	7.62	5.21	119.00	10.85	119.51	107.45	12.06	9.908	
1,600.00	1,600.00	1,609.96	1,609.76	4.85	8.01	6.04	117.08	12.39	117.75	105.17	12.58	9.358	
1,700.00	1,700.00	1,708.28	1,708.06	5.02	8.26	6.83	115.66	13.85	116.48	103.53	12.96	8.990	
1,730.08	1,730.08	1,737.81	1,737.58	5.07	8.33	7.02	115.54	14.22	116.41	103.35	13.06	8.910	
1,800.00	1,800.00	1,806.46	1,806.22	5.19	8.50	7.37	115.83	14.97	116.80	103.48	13.31	8.773	
1,900.00	1,900.00	1,906.47	1,906.23	5.35	8.76	7.78	116.79	15.96	117.88	104.18	13.70	8.604	
2,000.00	2,000.00	2,006.50	2,006.24	5.50	9.03	8.21	117.73	16.98	118.95	104.86	14.09	8.445	
2,100.00	2,099.99	2,106.56	2,106.30	5.65	9.31	-36.41	118.55	18.43	119.28	104.82	14.46	8.249	
2,200.00	2,199.96	2,206.21	2,205.92	5.81	9.62	-36.23	119.27	20.48	118.19	103.36	14.83	7.972	
2,300.00	2,299.86	2,304.66	2,304.34	5.98	10.02	-36.94	120.99	21.89	116.63	101.47	15.16	7.695	
2,400.00	2,399.73	2,403.69	2,403.33	6.17	10.43	-38.53	124.10	22.23	115.64	100.12	15.52	7.452	
2,500.00	2,499.59	2,503.87	2,503.45	6.37	10.86	-40.30	127.38	22.32	114.87	98.95	15.91	7.218	
2,600.00	2,599.45	2,603.99	2,603.52	6.58	11.17	-42.13	130.47	22.33	114.01	97.70	16.31	6.989	
2,700.00	2,699.31	2,704.03	2,703.52	6.80	11.35	-44.17	133.44	21.95	113.15	96.44	16.71	6.772	
2,800.00	2,799.18	2,804.22	2,803.67	7.04	11.51	-46.46	136.27	21.15	112.30	95.20	17.10	6.567	
2,900.00	2,899.04	2,904.50	2,903.90	7.28	11.66	-48.98	138.75	20.00	111.30	93.81	17.49	6.364	
3,000.00	2,998.90	3,004.64	3,004.02	7.53	11.81	-51.67	140.89	18.63	110.21	92.34	17.87	6.168	
3,100.00	3,098.77	3,104.76	3,104.10	7.78	11.95	-54.38	142.81	17.36	109.14	90.89	18.24	5.982	
3,200.00	3,198.63	3,205.52	3,204.85	8.05	12.09	-57.08	144.28	16.31	107.82	89.21	18.60	5.796	
3,300.00	3,298.53	3,306.42	3,305.74	8.31	12.24	-59.31	144.90	15.70	106.25	87.31	18.95	5.608	
3,400.00	3,398.50	3,407.67	3,406.99	8.55	12.44	-60.62	144.54	15.64	104.61	85.42	19.19	5.452	
3,500.00	3,498.49	3,508.49	3,507.80	8.72	12.65	-15.93	143.11	16.25	102.65	83.23	19.42	5.285	
3,600.00	3,598.49	3,607.28	3,606.58	8.83	12.90	-15.67	142.12	16.99	101.48	81.78	19.70	5.152	
3,648.94	3,647.43	3,655.63	3,654.93	8.88	13.03	-15.51	142.06	17.32	101.34	81.52	19.82	5.112 CC, ES	
3,700.00	3,698.49	3,706.15	3,705.45	8.93	13.14	-15.31	142.29	17.62	101.48	81.52	19.96	5.084	
3,800.00	3,798.49	3,805.18	3,804.47	9.04	13.30	-15.00	143.40	17.89	102.49	82.25	20.25	5.063	
3,900.00	3,898.49	3,904.40	3,903.68	9.14	13.47	-14.81	145.33	17.73	104.41	83.87	20.54	5.084	
4,000.00	3,998.49	4,003.93	4,003.18	9.24	13.64	-14.68	147.72	17.35	106.84	85.99	20.85	5.125	
4,100.00	4,098.49	4,102.73	4,101.93	9.35	13.82	-14.52	150.67	16.90	109.84	88.62	21.22	5.176	
4,200.00	4,198.49	4,200.71	4,199.80	9.45	14.01	-13.86	155.31	17.04	114.40	92.74	21.66	5.281	
4,300.00	4,298.49	4,299.83	4,298.72	9.55	14.23	-12.83	161.54	17.74	120.35	98.23	22.12	5.440	
4,400.00	4,398.49	4,399.83	4,398.52	9.65	14.48	-11.91	167.81	18.39	126.33	103.74	22.59	5.592	
4,500.00	4,498.49	4,499.91	4,498.41	9.75	14.70	-11.17	173.86	18.85	132.17	109.19	22.98	5.751	
4,600.00	4,598.49	4,600.04	4,598.38	9.86	14.92	-10.62	179.64	19.05	137.80	114.47	23.33	5.906	
4,700.00	4,698.49	4,700.84	4,699.04	9.96	15.14	-10.20	185.00	19.10	143.02	119.33	23.69	6.037	
4,800.00	4,798.49	4,801.80	4,799.89	10.06	15.36	-9.85	189.63	19.21	147.51	123.47	24.05	6.134	

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



FLAT CREEK
RESOURCES

Anticollision Report

Company:	Flat Creek Resources, LLC	Local Co-ordinate Reference:	Well Phantom Bank 31 Fed Com No. 511H
Project:	Eddy County, New Mexico NAD27 NME	TVD Reference:	RKB=3129+25 @ 3154.00ft
Reference Site:	Phantom Bank 31 Fed Com	MD Reference:	RKB=3129+25 @ 3154.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Phantom Bank 31 Fed Com No. 511H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev2	Offset TVD Reference:	Offset Datum

Offset Design: Phantom Bank 31 Fed Com - Phantom Bank 31 Fed Com No. 506H - Original Hole - Surveys Original Hole												Offset Site Error:	0.00 ft
Survey Program: 220-MWD												Offset Well Error:	0.00 ft
Rule Assigned:												Warning	
Measured Depth (ft)	Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
4,900.00	4,998.49	4,901.83	4,899.84	10.16	15.57	-9.63	193.76	19.07	151.61	127.21	24.40	6.214	
5,000.00	4,998.49	5,001.89	4,999.81	10.26	15.79	-9.63	197.73	18.41	155.63	130.89	24.74	6.290	
5,100.00	5,098.47	5,102.08	5,099.93	10.51	15.99	56.48	201.52	17.43	158.58	133.33	25.25	6.281	
5,200.00	5,198.33	5,202.27	5,200.04	10.82	16.19	57.80	205.11	16.24	159.50	133.55	25.94	6.148	
5,300.00	5,297.97	5,302.36	5,300.07	10.84	16.39	60.07	208.49	14.78	158.61	132.22	26.39	6.011	
5,400.00	5,397.52	5,402.26	5,399.90	10.89	16.59	62.54	211.66	13.06	157.38	130.54	26.84	5.864	
5,500.00	5,497.07	5,501.88	5,499.46	10.96	16.79	65.10	214.86	11.52	156.47	129.17	27.29	5.733	
5,600.00	5,596.63	5,601.08	5,598.60	11.04	17.01	67.78	218.19	10.29	156.04	128.29	27.75	5.624	
5,602.64	5,599.25	5,603.69	5,601.20	11.04	17.01	67.85	218.28	10.26	156.04	128.28	27.76	5.621	
5,700.00	5,696.18	5,699.88	5,697.32	11.13	17.24	70.57	222.01	9.42	156.49	128.30	28.19	5.551	
5,800.00	5,795.74	5,799.63	5,796.98	11.24	17.43	73.49	226.21	8.92	157.71	129.13	28.58	5.519	
5,900.00	5,895.29	5,899.92	5,897.19	11.36	17.62	76.42	230.09	8.50	159.02	130.08	28.94	5.495	
6,000.00	5,994.84	6,000.35	5,997.54	11.49	17.83	78.99	233.74	7.10	160.29	131.01	29.28	5.474	
6,100.00	6,094.40	6,100.28	6,097.39	11.63	18.04	81.21	237.29	4.84	161.54	131.94	29.60	5.457	
6,200.00	6,193.95	6,200.16	6,197.16	11.78	18.26	83.18	240.96	2.00	162.98	133.07	29.91	5.450	
6,300.00	6,293.50	6,300.73	6,297.61	11.94	18.46	85.01	244.54	-1.27	164.37	134.20	30.17	5.448	
6,400.00	6,393.06	6,401.14	6,397.92	12.11	18.67	86.79	247.71	-4.71	165.48	135.06	30.42	5.440	
6,500.00	6,492.61	6,499.57	6,496.25	12.30	18.89	88.69	250.91	-7.50	167.06	136.41	30.65	5.450	
6,600.00	6,592.17	6,598.16	6,594.76	12.49	19.12	90.84	254.54	-9.17	169.70	138.84	30.86	5.499	
6,700.00	6,691.72	6,697.84	6,694.38	12.69	19.38	93.26	258.03	-9.85	172.89	141.81	31.08	5.563	
6,800.00	6,791.27	6,797.50	6,793.99	12.90	19.64	95.92	261.06	-9.62	176.43	145.17	31.26	5.643	
6,900.00	6,890.83	6,897.36	6,893.81	13.12	19.90	98.62	263.78	-9.07	180.25	148.81	31.44	5.733	
7,000.00	6,990.38	6,997.11	6,993.53	13.35	20.17	101.28	266.25	-8.39	184.32	152.72	31.61	5.832	
7,100.00	7,089.93	7,096.78	7,093.16	13.58	20.43	103.82	268.65	-7.75	188.71	156.94	31.77	5.941	
7,200.00	7,189.49	7,196.84	7,193.20	13.83	20.68	106.25	270.97	-7.17	193.33	161.41	31.92	6.056	
7,300.00	7,289.10	7,297.25	7,293.59	14.05	20.94	108.50	272.90	-6.71	197.72	165.66	32.05	6.169	
7,400.00	7,388.93	7,397.25	7,393.57	14.35	21.19	109.85	274.51	-6.34	200.99	168.72	32.27	6.228	
7,500.00	7,488.91	7,497.09	7,493.40	14.66	21.44	110.18	276.23	-6.03	203.17	170.61	32.56	6.240	
7,600.00	7,588.91	7,597.50	7,593.79	14.72	21.69	44.15	277.94	-5.76	204.58	171.73	32.86	6.227	
7,700.00	7,688.91	7,698.04	7,694.33	14.80	21.94	43.92	279.32	-5.54	205.73	172.56	33.17	6.203	
7,800.00	7,788.91	7,798.41	7,794.69	14.87	22.18	43.72	280.50	-5.43	206.65	173.18	33.46	6.175	
7,900.00	7,888.91	7,898.79	7,895.06	14.95	22.41	43.49	281.60	-5.51	207.39	173.63	33.76	6.144	
8,000.00	7,988.91	7,999.28	7,995.54	15.02	22.63	43.20	282.71	-5.90	207.92	173.90	34.02	6.112	
8,100.00	8,088.91	8,099.70	8,095.95	15.09	22.84	42.83	283.87	-6.69	208.23	173.95	34.28	6.074	
8,200.00	8,188.91	8,199.95	8,196.19	15.17	23.04	42.38	285.10	-7.79	208.39	173.86	34.53	6.035	
8,300.00	8,288.91	8,299.96	8,296.18	15.24	23.24	41.86	286.40	-9.13	208.46	173.68	34.78	5.993	
8,400.00	8,388.91	8,399.57	8,395.78	15.32	23.45	41.33	287.83	-10.43	208.67	173.63	35.04	5.955	
8,500.00	8,488.91	8,499.39	8,495.57	15.39	23.67	40.75	289.51	-11.79	209.04	173.73	35.31	5.921	
8,600.00	8,588.91	8,599.37	8,595.49	15.47	23.90	39.83	292.01	-14.10	209.45	173.84	35.61	5.882	
8,700.00	8,688.91	8,700.39	8,696.40	15.54	24.11	38.55	295.20	-17.50	209.78	173.87	35.90	5.843	
8,800.00	8,788.91	8,800.08	8,797.97	15.61	24.33	37.16	298.03	-21.76	209.40	173.14	36.26	5.775	
8,900.00	8,888.91	8,902.69	8,898.43	15.69	24.52	35.73	300.39	-26.51	208.49	171.91	36.57	5.701	
9,000.00	8,988.91	9,002.99	8,998.61	15.76	24.71	34.37	302.38	-31.11	207.47	170.61	36.86	5.629	
9,100.00	9,088.91	9,102.55	9,098.06	15.84	24.89	33.08	304.19	-35.52	206.52	169.36	37.16	5.557	
9,200.00	9,188.91	9,202.06	9,197.45	15.91	25.08	31.80	306.11	-39.75	205.87	168.41	37.46	5.496	
9,300.00	9,288.91	9,302.61	9,297.91	15.99	25.26	30.56	307.89	-43.89	205.25	167.50	37.76	5.436	
9,400.00	9,388.91	9,403.10	9,398.30	16.06	25.44	29.38	309.26	-47.97	204.41	166.37	38.04	5.373	
9,500.00	9,488.91	9,503.13	9,498.26	16.14	25.59	28.41	310.13	-51.43	203.49	165.20	38.29	5.315	
9,600.00	9,588.91	9,602.19	9,597.30	16.21	25.76	27.74	310.49	-53.91	202.64	164.12	38.52	5.261	
9,625.25	9,614.15	9,626.55	9,621.65	16.23	25.80	27.64	310.61	-54.25	202.58	164.00	38.58	5.251	
9,700.00	9,688.91	9,698.68	9,693.78	16.29	25.94	27.53	311.20	-54.38	203.06	164.33	38.74	5.242	
9,800.00	9,788.91	9,796.53	9,791.60	16.37	26.17	27.80	312.52	-52.60	205.10	166.15	38.95	5.265	

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

FLAT CREEK
RESOURCES

Anticollision Report

Company:	Flat Creek Resources, LLC	Local Co-ordinate Reference:	Well Phantom Bank 31 Fed Com No. 511H
Project:	Eddy County, New Mexico NAD27 NME	TVD Reference:	RKB=3129+25 @ 3154.00ft
Reference Site:	Phantom Bank 31 Fed Com	MD Reference:	RKB=3129+25 @ 3154.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Phantom Bank 31 Fed Com No. 511H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev2	Offset TVD Reference:	Offset Datum

Offset Design: Phantom Bank 31 Fed Com - Phantom Bank 31 Fed Com No. 506H - Original Hole - Surveys Original Hole												Offset Site Error:	0.00 ft
Survey Program: 220-MWD												Offset Well Error:	0.00 ft
Rule Assigned:												Warning	
Measured Depth (ft)	Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
9,900.00	9,888.91	9,896.97	9,892.00	16.44	26.48	28.40	313.48	-49.63	207.33	168.10	39.23	5.285	
10,000.00	9,988.91	9,998.60	9,993.56	16.52	26.65	29.23	313.71	-46.07	209.23	169.83	39.40	5.310	
10,100.00	10,088.91	10,101.56	10,096.48	16.59	26.64	29.98	312.96	-43.36	209.89	170.40	39.49	5.315	
10,200.00	10,188.91	10,202.66	10,197.56	16.67	26.61	30.56	311.51	-41.76	209.45	169.90	39.55	5.295	
10,300.00	10,288.91	10,302.84	10,297.73	16.74	26.55	30.90	310.36	-40.98	208.86	169.24	39.62	5.271	
10,400.00	10,388.91	10,403.20	10,398.08	16.82	26.46	31.02	309.54	-40.99	208.15	168.52	39.63	5.252	
10,500.00	10,488.91	10,503.82	10,498.70	16.89	26.38	31.08	308.59	-41.28	207.20	167.56	39.64	5.228	
10,600.00	10,588.91	10,605.74	10,600.60	16.97	26.37	30.86	307.68	-42.76	205.69	166.00	39.69	5.183	
10,700.00	10,688.91	10,714.03	10,708.65	17.05	26.46	29.30	306.88	-49.64	201.88	161.94	39.94	5.055	
10,800.00	10,788.91	10,842.31	10,831.03	17.12	26.61	19.66	306.20	-85.70	189.08	147.98	41.09	4.601	
10,900.00	10,888.91	10,933.52	10,905.10	17.20	26.79	3.21	305.52	-138.45	174.86	132.18	42.68	4.097	
10,918.33	10,907.23	10,946.67	10,914.73	17.21	26.81	0.27	305.55	-147.41	174.40	131.42	42.98	4.058 SF	
11,000.00	10,988.91	10,992.00	10,946.67	17.27	26.92	-10.17	305.73	-179.57	184.21	139.93	44.28	4.160	
11,100.00	11,088.91	11,047.65	10,982.35	17.35	27.17	-22.79	307.22	-222.21	222.44	176.57	45.88	4.849	
11,200.00	11,188.91	11,086.00	11,003.93	17.43	27.35	-30.59	309.69	-253.80	282.96	235.89	47.07	6.012	
11,300.00	11,288.91	11,112.92	11,017.20	17.50	27.53	-35.51	311.75	-277.12	356.62	308.06	48.56	7.344	
11,400.00	11,388.91	11,133.82	11,026.14	17.58	27.68	-39.05	313.23	-295.94	438.25	388.37	49.89	8.785	
11,500.00	11,488.90	11,149.97	11,032.21	17.65	27.79	40.86	314.30	-310.88	524.82	473.80	51.02	10.287	
11,600.00	11,588.21	11,180.00	11,041.47	17.97	28.00	28.38	316.12	-339.37	611.19	558.39	52.80	11.576	
11,700.00	11,684.17	11,180.00	11,041.47	18.46	28.00	22.50	316.12	-339.37	692.00	638.75	53.25	12.995	
11,800.00	11,773.87	11,180.00	11,041.47	18.98	28.00	18.38	316.12	-339.37	768.38	714.83	53.55	14.350	
11,900.00	11,854.58	11,230.19	11,051.38	19.49	28.31	14.46	318.49	-388.48	834.76	778.34	56.42	14.796	
12,000.00	11,923.84	11,274.00	11,054.48	19.96	28.59	11.99	319.80	-432.13	895.27	836.32	58.94	15.188	
12,100.00	11,979.56	11,290.21	11,054.65	20.39	28.71	10.66	320.14	-448.34	945.56	886.40	59.16	15.984	
12,200.00	12,020.29	11,368.00	11,055.13	20.88	29.31	9.34	321.48	-526.11	984.34	923.90	60.43	16.288	
12,300.00	12,044.96	11,453.02	11,054.71	21.68	30.11	8.68	323.91	-611.09	1,009.06	948.08	60.98	16.546	
12,400.00	12,052.83	11,545.48	11,053.24	22.89	31.12	8.64	328.33	-703.44	1,019.04	957.41	61.63	16.536	
12,500.00	12,051.38	11,633.76	11,051.18	24.38	32.20	8.95	332.96	-791.56	1,020.94	958.80	62.14	16.429	
12,600.00	12,049.92	11,751.56	11,048.43	26.06	33.81	9.36	338.69	-909.20	1,022.85	960.04	62.81	16.284	
12,700.00	12,048.46	11,862.54	11,047.54	27.87	35.51	9.66	342.45	-1,020.11	1,022.99	959.51	63.47	16.116	
12,800.00	12,046.99	11,981.94	11,047.11	29.77	37.50	9.82	343.44	-1,139.49	1,022.38	958.12	64.26	15.910	
12,900.00	12,045.53	12,088.02	11,048.40	31.75	39.39	9.70	339.21	-1,245.47	1,019.27	954.32	64.94	15.695	
13,000.00	12,044.07	12,177.14	11,048.54	33.80	40.99	9.53	334.66	-1,334.48	1,017.05	951.56	65.49	15.529	
13,100.00	12,042.60	12,270.30	11,047.74	35.89	42.71	9.31	329.39	-1,427.48	1,015.76	949.67	66.09	15.369	
13,200.00	12,041.14	12,360.45	11,046.41	38.03	44.44	9.11	324.51	-1,517.48	1,015.15	948.46	66.69	15.223	
13,202.98	12,041.10	12,363.06	11,046.36	38.09	44.49	9.11	324.43	-1,520.09	1,015.15	948.45	66.71	15.218	
13,300.00	12,039.68	12,448.89	11,044.57	40.20	46.19	9.09	322.96	-1,605.89	1,015.70	948.37	67.33	15.084	
13,400.00	12,038.22	12,543.66	11,041.87	42.40	48.08	9.12	322.34	-1,700.62	1,017.19	949.10	68.09	14.939	
13,500.00	12,036.75	12,642.14	11,038.93	44.63	50.08	9.16	321.89	-1,799.05	1,018.86	949.94	68.92	14.783	
13,600.00	12,035.29	12,744.20	11,035.82	46.87	52.18	9.21	321.59	-1,901.06	1,020.60	950.77	69.83	14.616	
13,700.00	12,033.83	12,845.69	11,033.10	49.14	54.30	9.29	321.69	-2,002.52	1,022.04	951.27	70.78	14.440	
13,800.00	12,032.36	12,973.48	11,031.49	51.42	57.02	9.41	322.09	-2,130.29	1,022.14	950.09	72.06	14.185	
13,900.00	12,030.90	13,066.73	11,031.48	53.72	59.03	9.54	322.79	-2,223.54	1,021.07	948.03	73.04	13.980	
13,934.33	12,030.40	13,094.54	11,031.29	54.51	59.63	9.58	323.13	-2,251.35	1,020.96	947.62	73.34	13.920	
14,000.00	12,029.44	13,149.35	11,030.45	56.02	60.82	9.68	324.18	-2,306.14	1,021.36	947.41	73.95	13.811	
14,100.00	12,027.98	13,284.19	11,030.61	58.34	63.79	9.90	325.82	-2,440.96	1,020.09	944.62	75.48	13.516	
14,200.00	12,026.51	13,384.41	11,031.87	60.67	66.00	10.00	325.76	-2,541.17	1,017.64	941.02	76.62	13.281	
14,300.00	12,025.05	13,478.58	11,032.72	63.01	68.10	10.08	325.44	-2,635.33	1,015.52	937.79	77.72	13.066	
14,400.00	12,023.59	13,580.21	11,033.17	65.35	70.38	10.17	325.21	-2,736.96	1,013.86	934.93	78.93	12.845	
14,500.00	12,022.12	13,688.94	11,034.16	67.70	72.83	10.18	323.32	-2,845.67	1,011.46	931.29	80.17	12.617	
14,600.00	12,020.66	13,797.52	11,035.60	70.06	75.29	10.04	318.70	-2,954.14	1,008.22	926.91	81.31	12.400	
14,700.00	12,019.20	13,868.99	11,035.79	72.42	76.91	9.90	314.99	-3,025.52	1,005.90	923.73	82.17	12.242	

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

FLAT CREEK
RESOURCES

Anticollision Report

Company:	Flat Creek Resources, LLC	Local Co-ordinate Reference:	Well Phantom Bank 31 Fed Com No. 511H
Project:	Eddy County, New Mexico NAD27 NME	TVD Reference:	RKB=3129+25 @ 3154.00ft
Reference Site:	Phantom Bank 31 Fed Com	MD Reference:	RKB=3129+25 @ 3154.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Phantom Bank 31 Fed Com No. 511H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev2	Offset TVD Reference:	Offset Datum

Offset Design: Phantom Bank 31 Fed Com - Phantom Bank 31 Fed Com No. 506H - Original Hole - Surveys Original Hole												Offset Site Error:	0.00 ft
Survey Program: 220-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)			
14,718.37	12,018.93	13,881.83	11,035.59	72.86	77.20	9.87	314.30	-3,038.33	1,005.79	923.48	82.32	12.219	
14,800.00	12,017.74	13,941.19	11,033.77	74.79	78.55	9.72	310.92	-3,097.57	1,006.49	923.51	82.98	12.130	
14,900.00	12,016.27	14,021.99	11,029.33	77.16	80.38	9.47	305.92	-3,178.09	1,009.62	925.82	83.80	12.048	
15,000.00	12,014.81	14,125.35	11,023.25	79.54	82.76	9.28	301.86	-3,281.18	1,013.59	928.67	84.91	11.937	
15,100.00	12,013.35	14,243.41	11,018.53	81.92	85.49	9.29	300.79	-3,399.14	1,016.17	929.80	86.37	11.765	
15,200.00	12,011.88	14,366.72	11,016.08	84.30	88.34	9.34	300.03	-3,522.42	1,016.83	928.92	87.91	11.566	
15,300.00	12,010.42	14,462.42	11,015.03	86.69	90.56	9.37	299.01	-3,618.11	1,016.53	927.36	89.17	11.399	
15,400.00	12,008.96	14,566.78	11,013.81	89.07	92.99	9.38	297.79	-3,722.46	1,016.28	925.76	90.53	11.227	
15,500.00	12,007.50	14,680.87	11,013.63	91.47	95.65	9.34	295.14	-3,836.51	1,014.83	922.92	91.91	11.041	
15,600.00	12,006.03	14,766.84	11,013.73	93.86	97.65	9.28	292.60	-3,922.44	1,013.10	920.05	93.05	10.888	
15,616.36	12,005.79	14,777.43	11,013.58	94.25	97.90	9.27	292.31	-3,933.03	1,013.06	919.85	93.21	10.869	
15,700.00	12,004.57	14,832.00	11,011.88	96.26	99.18	9.23	290.94	-3,987.55	1,014.27	920.29	93.98	10.793	
15,800.00	12,003.11	14,925.00	11,007.31	98.66	101.35	9.18	289.17	-4,080.42	1,017.59	922.39	95.20	10.689	
15,900.00	12,001.64	15,047.05	11,002.64	101.06	104.21	9.14	287.24	-4,202.36	1,019.87	923.10	96.77	10.540	
16,000.00	12,000.18	15,191.71	11,000.40	103.46	107.62	9.17	285.69	-4,346.98	1,020.44	921.84	98.59	10.350	
16,100.00	11,998.72	15,317.49	11,004.31	105.86	110.58	9.14	282.50	-4,472.65	1,015.64	915.51	100.13	10.143	
16,200.00	11,997.26	15,407.86	11,007.39	108.27	112.71	9.07	279.23	-4,562.91	1,010.49	909.12	101.37	9.968	
16,300.00	11,995.79	15,487.00	11,008.85	110.68	114.58	8.98	276.05	-4,641.98	1,006.84	904.34	102.50	9.823	
16,400.00	11,994.33	15,580.00	11,008.92	113.09	116.77	8.85	272.15	-4,734.90	1,004.87	901.20	103.67	9.693	
16,500.00	11,992.87	15,663.18	11,007.95	115.50	118.74	8.74	269.01	-4,818.01	1,004.17	899.39	104.78	9.584	
16,511.32	11,992.70	15,674.00	11,007.77	115.77	119.00	8.73	268.64	-4,828.82	1,004.16	899.24	104.91	9.571	
16,600.00	11,991.41	15,754.02	11,006.10	117.91	120.89	8.65	266.17	-4,908.79	1,004.48	898.51	105.96	9.479	
16,700.00	11,989.94	15,845.94	11,003.50	120.32	123.07	8.58	263.74	-5,000.63	1,005.64	898.46	107.19	9.382	
16,800.00	11,988.48	15,964.95	11,000.72	122.73	125.90	8.54	261.62	-5,119.60	1,006.49	897.74	108.75	9.255	
16,900.00	11,987.02	16,080.56	11,000.45	125.15	128.65	8.52	259.36	-5,235.17	1,005.17	894.88	110.29	9.114	
17,000.00	11,985.55	16,170.69	11,000.53	127.56	130.79	8.46	256.67	-5,325.26	1,003.44	891.90	111.54	8.996	
17,033.02	11,985.07	16,194.71	11,000.24	128.36	131.36	8.43	255.95	-5,349.27	1,003.29	891.39	111.90	8.966	
17,100.00	11,984.09	16,245.83	10,998.91	129.98	132.58	8.39	254.51	-5,400.35	1,003.89	891.25	112.64	8.912	
17,175.07	11,982.99	16,316.05	10,996.44	131.79	134.25	8.32	252.48	-5,470.50	1,005.26	891.70	113.55	8.853	

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

FLAT CREEK
RESOURCES

Anticollision Report

Company:	Flat Creek Resources, LLC	Local Co-ordinate Reference:	Well Phantom Bank 31 Fed Com No. 511H
Project:	Eddy County, New Mexico NAD27 NME	TVD Reference:	RKB=3129+25 @ 3154.00ft
Reference Site:	Phantom Bank 31 Fed Com	MD Reference:	RKB=3129+25 @ 3154.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Phantom Bank 31 Fed Com No. 511H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev2	Offset TVD Reference:	Offset Datum

Offset Design: Phantom Bank 31 Fed Com - Phantom Bank 31 Fed Com No. 508H - Original Hole - Surveys Original Hole												Offset Site Error:	0.00 ft
Survey Program: 311-MWD												Offset Well Error:	0.00 ft
Measured Depth (ft)	Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	179.61	-952.80	6.53	952.93				
100.00	100.00	84.60	84.60	0.43	0.78	179.60	-952.84	6.62	952.86	951.66	1.21	790.036	
200.00	200.00	183.55	183.55	1.25	1.69	179.58	-952.99	6.94	953.01	950.07	2.94	324.239	
300.00	300.00	282.49	282.49	1.75	2.61	179.55	-953.24	7.51	953.27	948.93	4.34	219.499	
400.00	400.00	390.44	390.43	2.13	3.37	179.50	-953.26	8.38	953.31	947.83	5.48	173.959	
500.00	500.00	502.00	501.98	2.46	4.08	179.43	-952.00	9.48	952.19	945.69	6.50	146.585	
600.00	600.00	587.67	587.63	2.75	4.83	179.34	-951.22	10.93	951.28	943.70	7.58	125.469	
616.33	616.33	601.87	601.83	2.80	4.96	179.32	-951.20	11.26	951.26	943.51	7.75	122.684	
700.00	700.00	685.00	684.92	3.02	5.74	179.18	-951.71	13.70	951.81	943.08	8.73	109.058	
800.00	800.00	805.76	805.63	3.27	6.88	178.97	-951.17	17.10	951.54	941.42	10.12	94.013	
900.00	900.00	931.16	930.92	3.50	8.10	178.83	-946.51	19.29	947.80	936.59	11.21	84.538	
1,000.00	1,000.00	1,046.08	1,045.62	3.72	8.96	178.67	-940.04	21.81	942.21	930.33	11.88	79.290	
1,100.00	1,100.00	1,128.63	1,128.03	3.92	9.24	178.59	-935.41	23.08	936.66	924.21	12.45	75.231	
1,200.00	1,200.00	1,209.59	1,208.94	4.12	9.50	178.62	-932.57	22.43	933.14	920.14	13.00	71.793	
1,300.00	1,300.00	1,294.37	1,293.68	4.31	9.79	178.76	-931.26	20.23	931.51	917.96	13.55	68.722	
1,362.07	1,362.07	1,348.28	1,347.57	4.43	9.99	178.84	-931.05	18.85	931.24	917.34	13.90	66.979 CC	
1,400.00	1,400.00	1,381.23	1,380.50	4.50	10.11	178.89	-931.15	18.05	931.34	917.22	14.12	65.977 ES	
1,500.00	1,500.00	1,476.58	1,475.83	4.68	10.38	179.03	-932.18	15.85	932.36	917.77	14.59	63.902	
1,600.00	1,600.00	1,580.98	1,580.19	4.85	10.60	179.18	-933.06	13.37	933.17	918.19	14.97	62.316	
1,700.00	1,700.00	1,682.77	1,681.95	5.02	10.81	179.32	-933.53	11.03	933.60	918.25	15.35	60.821	
1,800.00	1,800.00	1,783.43	1,782.60	5.19	11.02	179.43	-933.89	9.31	933.94	918.22	15.72	59.411	
1,900.00	1,900.00	1,882.71	1,881.87	5.35	11.22	179.52	-934.24	7.88	934.28	918.20	16.08	58.108	
2,000.00	2,000.00	1,981.70	1,980.84	5.50	11.43	179.63	-934.69	6.03	934.72	918.29	16.43	56.887	
2,100.00	2,099.99	2,075.67	2,074.78	5.65	11.61	134.79	-935.46	3.89	936.15	919.39	16.75	55.886	
2,200.00	2,199.96	2,174.00	2,173.06	5.81	11.80	135.04	-936.94	1.23	939.49	922.41	17.08	55.000	
2,300.00	2,299.86	2,272.73	2,271.75	5.98	11.97	135.33	-938.57	-0.95	944.24	926.84	17.40	54.261	
2,400.00	2,399.73	2,375.66	2,374.68	6.17	12.14	135.60	-939.82	-1.78	949.19	931.45	17.74	53.503	
2,500.00	2,499.59	2,471.74	2,470.74	6.37	12.30	135.83	-941.07	-2.08	954.25	936.17	18.08	52.766	
2,600.00	2,599.45	2,568.11	2,567.10	6.58	12.44	136.06	-942.70	-2.46	959.71	941.30	18.41	52.122	
2,700.00	2,699.31	2,666.96	2,665.93	6.80	12.50	136.29	-944.63	-2.77	965.44	946.78	18.67	51.722	
2,800.00	2,799.18	2,767.40	2,766.35	7.04	12.55	136.53	-946.47	-3.19	971.08	952.16	18.92	51.323	
2,900.00	2,899.04	2,866.25	2,865.18	7.28	12.60	136.76	-948.45	-3.64	976.91	957.72	19.19	50.918	
3,000.00	2,998.90	2,971.98	2,970.90	7.53	12.65	136.99	-950.29	-3.89	982.48	963.01	19.47	50.468	
3,100.00	3,098.77	3,072.54	3,071.45	7.78	12.76	137.17	-951.49	-3.41	987.49	967.69	19.80	49.885	
3,200.00	3,198.63	3,167.97	3,166.85	8.05	12.89	137.28	-953.00	-2.01	992.85	972.70	20.15	49.268	
3,300.00	3,298.53	3,263.40	3,262.24	8.31	13.05	137.35	-954.97	0.21	998.02	977.49	20.53	48.603	
3,400.00	3,398.50	3,358.85	3,357.63	8.55	13.23	137.33	-957.37	2.68	1,002.35	981.43	20.92	47.915	
3,500.00	3,498.49	3,445.78	3,444.48	8.72	13.49	-177.77	-960.19	5.21	1,006.14	984.84	21.30	47.232	
3,600.00	3,598.49	3,528.84	3,527.38	8.83	13.78	-177.94	-964.26	8.16	1,010.91	989.24	21.66	46.667	
3,700.00	3,698.49	3,621.68	3,619.96	8.93	14.11	-178.16	-970.18	11.78	1,017.13	995.06	22.07	46.087	
3,800.00	3,798.49	3,727.79	3,725.85	9.04	14.47	-178.29	-976.60	13.88	1,023.12	1,000.58	22.54	45.383	
3,900.00	3,898.49	3,835.19	3,833.09	9.14	14.74	-178.30	-982.33	13.91	1,028.46	1,005.51	22.95	44.811	
4,000.00	3,998.49	3,943.23	3,941.03	9.24	14.97	-178.29	-987.25	13.55	1,033.01	1,009.69	23.32	44.291	
4,100.00	4,098.49	4,044.28	4,041.99	9.35	15.18	-178.26	-991.35	12.92	1,037.09	1,013.42	23.67	43.807	
4,200.00	4,198.49	4,144.82	4,142.45	9.45	15.39	-178.21	-995.37	11.95	1,041.11	1,017.10	24.02	43.350	
4,300.00	4,298.49	4,246.22	4,243.76	9.55	15.52	-178.16	-999.32	10.87	1,045.04	1,020.76	24.29	43.027	
4,400.00	4,398.49	4,349.05	4,346.52	9.65	15.71	-178.12	-1,003.11	10.12	1,048.76	1,024.14	24.61	42.606	
4,500.00	4,498.49	4,449.86	4,447.26	9.75	15.89	-178.12	-1,006.60	9.86	1,052.22	1,027.30	24.92	42.222	
4,600.00	4,498.49	4,548.15	4,545.49	9.86	16.05	-178.13	-1,010.17	9.95	1,055.85	1,030.64	25.21	41.884	
4,700.00	4,498.49	4,649.94	4,647.22	9.96	16.26	-178.15	-1,013.80	10.14	1,059.41	1,033.86	25.54	41.477	
4,800.00	4,798.49	4,744.02	4,741.23	10.06	16.47	-178.16	-1,017.15	10.29	1,062.97	1,037.10	25.87	41.084	
4,900.00	4,898.49	4,830.55	4,827.67	10.16	16.69	-178.15	-1,021.17	10.01	1,067.62	1,041.42	26.20	40.747	

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

FLAT CREEK
RESOURCES

Anticollision Report

Company:	Flat Creek Resources, LLC	Local Co-ordinate Reference:	Well Phantom Bank 31 Fed Com No. 511H
Project:	Eddy County, New Mexico NAD27 NME	TVD Reference:	RKB=3129+25 @ 3154.00ft
Reference Site:	Phantom Bank 31 Fed Com	MD Reference:	RKB=3129+25 @ 3154.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Phantom Bank 31 Fed Com No. 511H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev2	Offset TVD Reference:	Offset Datum

Offset Design: Phantom Bank 31 Fed Com - Phantom Bank 31 Fed Com No. 508H - Original Hole - Surveys Original Hole												Offset Site Error:	0.00 ft
Survey Program: 311-MWD												Offset Well Error:	0.00 ft
Rule Assigned:												Warning	
Measured Depth (ft)	Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
5,000.00	4,998.49	4,928.34	4,925.30	10.26	16.93	-178.12	-1,026.75	9.19	1,073.35	1,046.78	26.57	40.401	
5,100.00	5,098.47	5,048.74	5,045.58	10.51	17.24	-112.34	-1,032.17	8.59	1,078.50	1,051.33	27.18	39.687	
5,200.00	5,198.33	5,152.53	5,149.31	10.82	17.43	-112.49	-1,035.51	8.25	1,083.70	1,055.92	27.78	39.009	
5,300.00	5,297.97	5,255.84	5,252.57	10.84	17.65	-112.81	-1,038.63	7.58	1,090.04	1,061.92	28.11	38.772	
5,400.00	5,397.52	5,353.00	5,349.70	10.89	17.86	-113.24	-1,041.19	7.25	1,096.40	1,067.95	28.45	38.538	
5,500.00	5,497.07	5,440.60	5,437.25	10.96	18.17	-113.63	-1,044.06	7.26	1,103.49	1,074.60	28.89	38.194	
5,600.00	5,596.63	5,522.64	5,519.19	11.04	18.46	-114.02	-1,048.07	7.57	1,112.21	1,082.90	29.31	37.945	
5,700.00	5,696.18	5,625.03	5,621.41	11.13	18.84	-114.50	-1,053.91	8.10	1,121.82	1,091.99	29.83	37.605	
5,800.00	5,795.74	5,733.13	5,729.38	11.24	19.24	-114.98	-1,059.29	8.31	1,130.78	1,100.39	30.38	37.218	
5,900.00	5,895.29	5,824.62	5,820.75	11.36	19.49	-115.37	-1,063.83	8.28	1,139.78	1,109.00	30.78	37.031	
6,000.00	5,994.84	5,914.00	5,909.99	11.49	19.74	-115.74	-1,068.81	8.11	1,149.45	1,118.27	31.17	36.871	
6,100.00	6,094.40	6,011.76	6,007.57	11.63	20.03	-116.12	-1,074.74	7.77	1,159.65	1,128.03	31.62	36.678	
6,200.00	6,193.95	6,107.03	6,102.65	11.78	20.31	-116.49	-1,080.89	7.29	1,170.27	1,138.22	32.05	36.511	
6,300.00	6,293.50	6,213.24	6,208.64	11.94	20.62	-116.88	-1,087.58	6.61	1,180.80	1,148.26	32.53	36.295	
6,400.00	6,393.06	6,318.97	6,314.20	12.11	20.93	-117.25	-1,093.62	5.83	1,190.78	1,157.76	33.01	36.069	
6,500.00	6,492.61	6,423.30	6,418.37	12.30	21.24	-117.62	-1,099.10	5.02	1,200.34	1,166.85	33.49	35.844	
6,600.00	6,592.17	6,528.86	6,523.81	12.49	21.54	-117.99	-1,104.16	4.19	1,209.50	1,175.54	33.96	35.611	
6,700.00	6,691.72	6,635.71	6,630.56	12.69	21.84	-118.35	-1,108.67	3.23	1,218.12	1,183.68	34.44	35.367	
6,800.00	6,791.27	6,739.23	6,734.00	12.90	22.13	-118.69	-1,112.52	2.23	1,226.27	1,191.36	34.91	35.131	
6,900.00	6,890.83	6,841.59	6,836.30	13.12	22.41	-119.03	-1,116.05	1.35	1,234.21	1,198.84	35.37	34.898	
7,000.00	6,990.38	6,939.64	6,934.30	13.35	22.68	-119.36	-1,119.35	0.59	1,242.11	1,206.30	35.82	34.678	
7,100.00	7,089.93	7,037.34	7,031.93	13.58	22.96	-119.68	-1,122.77	-0.10	1,250.20	1,213.92	36.27	34.466	
7,200.00	7,189.49	7,139.43	7,133.96	13.83	23.24	-120.01	-1,126.30	-0.78	1,258.29	1,221.54	36.74	34.244	
7,300.00	7,289.10	7,241.00	7,235.47	14.05	23.53	-120.40	-1,129.59	-1.41	1,265.89	1,228.71	37.19	34.042	
7,400.00	7,388.93	7,340.07	7,334.49	14.35	23.81	-120.68	-1,132.75	-1.94	1,271.87	1,234.21	37.65	33.778	
7,500.00	7,488.91	7,439.76	7,434.13	14.66	24.09	-120.80	-1,135.97	-2.34	1,276.12	1,238.01	38.11	33.485	
7,600.00	7,588.91	7,540.70	7,535.01	14.72	24.37	173.46	-1,139.18	-2.69	1,279.25	1,240.79	38.45	33.266	
7,700.00	7,688.91	7,642.05	7,636.32	14.80	24.66	173.49	-1,142.31	-2.99	1,282.28	1,243.47	38.81	33.036	
7,800.00	7,788.91	7,743.96	7,738.19	14.87	24.95	173.52	-1,145.30	-3.15	1,285.18	1,246.00	39.18	32.806	
7,900.00	7,888.91	7,847.07	7,841.25	14.95	25.23	173.53	-1,148.12	-3.17	1,287.89	1,248.36	39.54	32.575	
8,000.00	7,988.91	7,951.02	7,945.17	15.02	25.52	173.54	-1,150.64	-3.07	1,290.31	1,250.41	39.90	32.340	
8,100.00	8,088.91	8,067.30	8,061.43	15.09	25.72	173.56	-1,152.67	-3.24	1,292.05	1,251.88	40.17	32.163	
8,200.00	8,188.91	8,180.44	8,174.57	15.17	25.89	173.61	-1,153.17	-4.43	1,292.34	1,251.94	40.41	31.984	
8,201.36	8,190.27	8,181.64	8,175.77	15.17	25.90	173.61	-1,153.17	-4.45	1,292.34	1,251.94	40.41	31.982	
8,300.00	8,288.91	8,268.48	8,262.59	15.24	26.03	173.67	-1,153.70	-5.60	1,292.80	1,252.19	40.61	31.838	
8,400.00	8,388.91	8,357.10	8,351.20	15.32	26.18	173.72	-1,155.05	-6.71	1,294.17	1,253.36	40.81	31.711	
8,500.00	8,488.91	8,452.24	8,446.31	15.39	26.42	173.77	-1,157.05	-7.69	1,296.15	1,255.03	41.12	31.517	
8,600.00	8,588.91	8,548.04	8,542.08	15.47	26.67	173.81	-1,159.39	-8.35	1,298.50	1,257.06	41.44	31.333	
8,700.00	8,688.91	8,649.36	8,643.37	15.54	26.95	173.84	-1,161.92	-8.77	1,300.94	1,259.15	41.79	31.130	
8,800.00	8,788.91	8,750.85	8,744.83	15.61	27.23	173.86	-1,164.32	-8.96	1,303.27	1,261.13	42.14	30.927	
8,900.00	8,888.91	8,852.80	8,846.76	15.69	27.51	173.88	-1,166.59	-9.13	1,305.47	1,262.98	42.49	30.725	
9,000.00	8,988.91	8,954.68	8,948.61	15.76	27.78	173.90	-1,168.70	-9.31	1,307.51	1,264.67	42.84	30.524	
9,100.00	9,088.91	9,056.45	9,050.37	15.84	28.05	173.91	-1,170.65	-9.30	1,309.41	1,266.23	43.18	30.326	
9,200.00	9,188.91	9,155.08	9,148.97	15.91	28.30	173.91	-1,172.46	-9.22	1,311.25	1,267.74	43.51	30.139	
9,300.00	9,288.91	9,251.50	9,245.38	15.99	28.55	173.95	-1,174.54	-9.81	1,313.33	1,269.50	43.83	29.966	
9,400.00	9,388.91	9,359.86	9,353.70	16.06	28.80	174.01	-1,176.87	-10.88	1,315.38	1,271.24	44.14	29.802	
9,500.00	9,488.91	9,465.29	9,459.12	16.14	29.03	174.03	-1,178.31	-11.31	1,316.68	1,272.25	44.44	29.629	
9,600.00	9,588.91	9,569.39	9,563.22	16.21	29.26	174.05	-1,179.41	-11.62	1,317.71	1,272.97	44.74	29.455	
9,700.00	9,688.91	9,692.06	9,685.88	16.29	29.29	174.06	-1,179.42	-11.84	1,317.70	1,272.87	44.83	29.392	
9,800.00	9,788.91	9,798.30	9,792.11	16.37	29.28	174.05	-1,177.92	-11.85	1,316.28	1,271.37	44.90	29.313	
9,900.00	9,888.91	9,887.80	9,881.61	16.44	29.23	174.03	-1,177.03	-11.47	1,315.33	1,270.38	44.95	29.259	
9,993.39	9,982.29	9,973.99	9,967.79	16.51	29.23	174.00	-1,176.78	-10.76	1,315.13	1,270.08	45.05	29.195	

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

FLAT CREEK
RESOURCES

Anticollision Report

Company:	Flat Creek Resources, LLC	Local Co-ordinate Reference:	Well Phantom Bank 31 Fed Com No. 511H
Project:	Eddy County, New Mexico NAD27 NME	TVD Reference:	RKB=3129+25 @ 3154.00ft
Reference Site:	Phantom Bank 31 Fed Com	MD Reference:	RKB=3129+25 @ 3154.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Phantom Bank 31 Fed Com No. 511H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev2	Offset TVD Reference:	Offset Datum

Offset Design: Phantom Bank 31 Fed Com - Phantom Bank 31 Fed Com No. 508H - Original Hole - Surveys Original Hole												Offset Site Error:	0.00 ft
Survey Program: 311-MWD												Offset Well Error:	0.00 ft
Reference	Offset	Rule Assigned:											
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Semi Major Axis 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)			
10,000.00	9,988.91	9,980.41	9,974.22	16.52	29.24	174.00	-1,176.77	-10.71	1,315.13	1,270.07	45.06	29.186	
10,100.00	10,088.91	10,077.57	10,071.37	16.59	29.33	173.97	-1,176.83	-10.14	1,315.26	1,270.01	45.25	29.068	
10,200.00	10,188.91	10,175.10	10,168.90	16.67	29.47	173.96	-1,177.13	-9.90	1,315.59	1,270.11	45.48	28.928	
10,300.00	10,288.91	10,273.04	10,266.84	16.74	29.66	173.96	-1,177.61	-9.75	1,316.08	1,270.33	45.76	28.763	
10,400.00	10,388.91	10,373.55	10,367.35	16.82	29.86	173.96	-1,178.20	-9.63	1,316.68	1,270.65	46.03	28.604	
10,500.00	10,488.91	10,476.17	10,469.96	16.89	30.04	173.95	-1,178.63	-9.42	1,317.12	1,270.82	46.30	28.446	
10,600.00	10,588.91	10,576.72	10,570.52	16.97	30.18	173.94	-1,178.90	-9.16	1,317.41	1,270.89	46.53	28.314	
10,700.00	10,688.91	10,672.73	10,666.52	17.05	30.35	173.94	-1,179.29	-9.09	1,317.83	1,271.05	46.78	28.172	
10,800.00	10,788.91	10,767.70	10,761.49	17.12	30.54	173.95	-1,180.07	-9.31	1,318.62	1,271.58	47.04	28.032	
10,900.00	10,888.91	10,864.26	10,858.02	17.20	30.76	174.04	-1,181.36	-11.19	1,319.75	1,272.42	47.33	27.886	
11,000.00	10,988.91	11,055.38	11,042.33	17.27	30.98	176.00	-1,180.72	-56.55	1,316.82	1,269.29	47.53	27.705	
11,100.00	11,088.91	11,273.59	11,215.58	17.35	31.19	-178.34	-1,169.66	-185.84	1,308.98	1,261.35	47.63	27.480	
11,200.00	11,188.91	11,358.58	11,266.30	17.43	31.39	-175.35	-1,161.57	-253.43	1,300.24	1,252.38	47.86	27.169	
11,300.00	11,288.91	11,416.04	11,295.71	17.50	31.57	-173.17	-1,155.26	-302.38	1,295.79	1,247.66	48.13	26.922	
11,327.32	11,316.23	11,428.51	11,301.72	17.52	31.62	-172.68	-1,153.86	-313.22	1,295.56	1,247.35	48.21	26.872	
11,400.00	11,388.91	11,456.00	11,314.39	17.58	31.73	-171.61	-1,150.78	-337.42	1,297.20	1,248.77	48.43	26.786	
11,500.00	11,488.90	11,488.42	11,328.75	17.65	31.88	-86.40	-1,147.30	-366.28	1,305.06	1,256.30	48.75	26.768	
11,600.00	11,588.21	11,516.66	11,341.01	17.97	32.02	-83.98	-1,144.60	-391.56	1,318.63	1,269.51	49.12	26.847	
11,700.00	11,684.17	11,550.00	11,354.69	18.46	32.21	-81.09	-1,142.09	-421.87	1,336.55	1,286.93	49.62	26.935	
11,800.00	11,773.87	11,579.04	11,365.73	18.98	32.39	-78.20	-1,140.49	-448.68	1,357.39	1,307.14	50.24	27.016	
11,900.00	11,854.58	11,595.00	11,371.41	19.49	32.50	-75.55	-1,139.82	-463.58	1,380.08	1,329.18	50.90	27.114	
12,000.00	11,923.84	11,643.00	11,385.71	19.96	32.86	-72.40	-1,139.06	-509.36	1,403.17	1,351.30	51.88	27.047	
12,100.00	11,979.56	11,688.00	11,395.48	20.39	33.22	-69.57	-1,139.35	-553.28	1,425.85	1,372.87	52.98	26.912	
12,200.00	12,020.29	11,751.07	11,405.50	20.88	33.77	-66.61	-1,139.56	-615.54	1,443.36	1,388.95	54.41	26.525	
12,300.00	12,044.96	11,807.98	11,411.62	21.68	34.33	-65.02	-1,139.39	-672.11	1,452.92	1,396.92	56.00	25.945	
12,400.00	12,052.83	11,879.68	11,414.99	22.89	35.09	-64.64	-1,140.00	-743.72	1,455.30	1,397.36	57.94	25.119	
12,500.00	12,051.38	11,965.81	11,414.17	24.38	36.12	-64.63	-1,138.90	-829.83	1,452.68	1,392.45	60.23	24.120	
12,600.00	12,049.92	12,038.04	11,411.80	26.06	37.04	-64.56	-1,138.46	-902.02	1,451.64	1,389.18	62.46	23.243	
12,601.03	12,049.90	12,038.73	11,411.77	26.08	37.05	-64.55	-1,138.46	-902.71	1,451.64	1,389.16	62.48	23.234	
12,700.00	12,048.46	12,109.00	11,408.91	27.87	38.00	-64.49	-1,139.53	-972.91	1,452.77	1,387.97	64.80	22.419	
12,800.00	12,046.99	12,172.44	11,406.36	29.77	38.95	-64.46	-1,142.09	-1,036.25	1,456.14	1,388.97	67.17	21.677	
12,900.00	12,045.53	12,255.53	11,403.88	31.75	40.26	-64.49	-1,147.60	-1,119.11	1,461.44	1,391.42	70.02	20.873	
13,000.00	12,044.07	12,351.17	11,403.45	33.80	41.81	-64.63	-1,155.54	-1,214.42	1,467.22	1,394.00	73.22	20.038	
13,100.00	12,042.60	12,446.22	11,405.16	35.89	43.38	-64.87	-1,164.74	-1,309.01	1,473.31	1,396.79	76.51	19.255	
13,200.00	12,041.14	12,645.77	11,411.75	38.03	46.93	-65.37	-1,177.43	-1,507.97	1,475.36	1,393.35	82.01	17.989	
13,300.00	12,039.68	12,797.23	11,415.89	40.20	49.99	-65.59	-1,179.26	-1,659.32	1,473.55	1,386.73	86.82	16.973	
13,400.00	12,038.22	12,915.27	11,413.74	42.40	52.38	-65.47	-1,174.22	-1,777.21	1,468.41	1,377.50	90.91	16.152	
13,500.00	12,036.75	12,989.14	11,410.70	44.63	53.86	-65.32	-1,170.65	-1,850.94	1,463.91	1,369.71	94.19	15.542	
13,600.00	12,035.29	13,054.21	11,407.34	46.87	55.14	-65.19	-1,168.98	-1,915.90	1,461.78	1,364.48	97.30	15.024	
13,672.95	12,034.22	13,112.71	11,404.19	48.53	56.32	-65.09	-1,168.44	-1,974.31	1,461.42	1,361.64	99.78	14.647	
13,700.00	12,033.83	13,138.00	11,402.86	49.14	56.83	-65.05	-1,168.41	-1,999.57	1,461.48	1,360.71	100.77	14.504	
13,800.00	12,032.36	13,215.01	11,399.42	51.42	58.40	-64.96	-1,169.34	-2,076.49	1,462.50	1,358.37	104.14	14.044	
13,900.00	12,030.90	13,298.84	11,397.20	53.72	60.13	-64.95	-1,172.18	-2,160.24	1,464.78	1,357.07	107.71	13.599	
14,000.00	12,029.44	13,419.69	11,395.95	56.02	62.65	-65.03	-1,177.37	-2,280.97	1,467.26	1,355.10	112.16	13.081	
14,100.00	12,027.98	13,543.50	11,395.94	58.34	65.26	-65.11	-1,180.47	-2,404.74	1,467.56	1,350.85	116.71	12.574	
14,179.11	12,026.82	13,619.06	11,396.65	60.18	66.86	-65.19	-1,182.25	-2,480.28	1,467.43	1,347.56	119.87	12.242	
14,200.00	12,026.51	13,636.91	11,396.82	60.67	67.24	-65.21	-1,182.73	-2,498.12	1,467.45	1,346.79	120.66	12.162	
14,300.00	12,025.05	13,721.84	11,397.44	63.01	69.06	-65.30	-1,185.47	-2,583.00	1,468.16	1,343.70	124.46	11.796	
14,400.00	12,023.59	13,808.55	11,396.15	65.35	70.94	-65.33	-1,188.41	-2,669.65	1,469.95	1,341.68	128.27	11.460	
14,500.00	12,022.12	13,912.80	11,394.41	67.70	73.21	-65.35	-1,191.86	-2,773.82	1,471.73	1,339.24	132.50	11.108	
14,600.00	12,020.66	14,034.11	11,393.66	70.06	75.88	-65.44	-1,196.87	-2,895.03	1,474.04	1,336.86	137.18	10.745	
14,700.00	12,019.20	14,167.50	11,394.69	72.42	78.86	-65.53	-1,197.99	-3,028.41	1,472.32	1,330.19	142.13	10.359	

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

FLAT CREEK
RESOURCES

Anticollision Report

Company:	Flat Creek Resources, LLC	Local Co-ordinate Reference:	Well Phantom Bank 31 Fed Com No. 511H
Project:	Eddy County, New Mexico NAD27 NME	TVD Reference:	RKB=3129+25 @ 3154.00ft
Reference Site:	Phantom Bank 31 Fed Com	MD Reference:	RKB=3129+25 @ 3154.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Phantom Bank 31 Fed Com No. 511H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev2	Offset TVD Reference:	Offset Datum

Offset Design: Phantom Bank 31 Fed Com - Phantom Bank 31 Fed Com No. 508H - Original Hole - Surveys Original Hole												Offset Site Error:	0.00 ft
Survey Program: 311-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)			
14,800.00	12,017.74	14,282.46	11,396.51	74.79	81.43	-65.63	-1,198.01	-3,143.34	1,469.75	1,323.05	146.69	10.019	
14,900.00	12,016.27	14,359.00	11,397.11	77.16	83.15	-65.67	-1,197.99	-3,219.88	1,467.54	1,317.06	150.47	9.753	
15,000.00	12,014.81	14,453.00	11,396.68	79.54	85.26	-65.70	-1,198.70	-3,313.88	1,466.50	1,311.90	154.59	9.486	
15,100.00	12,013.35	14,568.89	11,394.70	81.92	87.89	-65.66	-1,198.47	-3,429.75	1,465.12	1,305.99	159.13	9.207	
15,200.00	12,011.88	14,660.16	11,390.07	84.30	89.96	-65.49	-1,196.53	-3,520.88	1,463.38	1,300.34	163.04	8.975	
15,300.00	12,010.42	14,745.62	11,384.18	86.69	91.90	-65.28	-1,194.98	-3,606.12	1,462.67	1,295.89	166.78	8.770	
15,400.00	12,008.96	14,864.88	11,378.98	89.07	94.63	-65.10	-1,193.44	-3,725.24	1,461.37	1,290.10	171.27	8.533	
15,500.00	12,007.50	14,962.55	11,378.54	91.47	96.87	-65.12	-1,193.62	-3,822.91	1,459.81	1,284.30	175.51	8.318	
15,600.00	12,006.03	15,054.27	11,381.42	93.86	98.98	-65.28	-1,195.52	-3,914.55	1,458.47	1,278.68	179.79	8.112	
15,700.00	12,004.57	15,149.60	11,386.50	96.26	101.18	-65.55	-1,199.33	-4,009.67	1,457.96	1,273.67	184.29	7.911	
15,800.00	12,003.11	15,254.55	11,390.36	98.66	103.61	-65.76	-1,202.23	-4,114.51	1,457.04	1,268.10	188.94	7.712	
15,900.00	12,001.64	15,353.27	11,391.44	101.06	105.90	-65.86	-1,203.87	-4,213.20	1,456.20	1,262.85	193.35	7.531	
15,991.03	12,000.31	15,432.26	11,389.31	103.24	107.73	-65.81	-1,204.04	-4,292.16	1,455.68	1,258.70	196.97	7.390	
16,000.00	12,000.18	15,439.26	11,389.00	103.46	107.90	-65.80	-1,204.05	-4,299.15	1,455.68	1,258.38	197.31	7.378	
16,100.00	11,998.72	15,525.22	11,383.99	105.86	109.89	-65.65	-1,204.34	-4,384.96	1,456.45	1,255.32	201.13	7.241	
16,200.00	11,997.26	15,632.94	11,375.88	108.27	112.39	-65.39	-1,204.14	-4,492.38	1,457.52	1,252.21	205.31	7.099	
16,300.00	11,995.79	15,787.29	11,365.07	110.68	115.99	-64.98	-1,200.15	-4,646.27	1,456.18	1,245.94	210.23	6.926	
16,400.00	11,994.33	15,879.23	11,359.87	113.09	118.15	-64.76	-1,196.64	-4,738.00	1,453.21	1,239.09	214.12	6.787	
16,500.00	11,992.87	15,958.82	11,357.48	115.50	120.02	-64.68	-1,195.60	-4,817.54	1,451.39	1,233.46	217.93	6.660	
16,600.00	11,991.41	16,047.45	11,358.08	117.91	122.12	-64.75	-1,197.05	-4,906.15	1,450.65	1,228.52	222.13	6.531	
16,700.00	11,989.94	16,145.18	11,359.72	120.32	124.42	-64.88	-1,199.55	-5,003.84	1,450.33	1,223.72	226.61	6.400	
16,720.23	11,989.65	16,162.48	11,359.81	120.81	124.82	-64.89	-1,199.94	-5,021.13	1,450.31	1,222.87	227.44	6.377	
16,800.00	11,988.48	16,232.00	11,359.25	122.73	126.46	-64.92	-1,201.46	-5,090.63	1,450.63	1,219.92	230.70	6.288	
16,900.00	11,987.02	16,355.91	11,356.68	125.15	129.38	-64.88	-1,202.49	-5,214.51	1,450.30	1,214.77	235.54	6.157	
17,000.00	11,985.55	16,454.14	11,356.19	127.56	131.70	-64.90	-1,203.34	-5,312.73	1,449.39	1,209.49	239.89	6.042	
17,100.00	11,984.09	16,547.39	11,356.30	129.98	133.90	-64.96	-1,204.72	-5,405.96	1,448.76	1,204.57	244.18	5.933	
17,150.31	11,983.35	16,592.63	11,356.28	131.20	134.97	-64.98	-1,205.58	-5,451.20	1,448.67	1,202.36	246.30	5.882	
17,175.07	11,982.99	16,605.00	11,356.26	131.79	135.27	-64.99	-1,205.84	-5,463.57	1,448.73	1,201.62	247.10	5.863 SF	

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

FLAT CREEK
RESOURCES

Anticollision Report

Company:	Flat Creek Resources, LLC	Local Co-ordinate Reference:	Well Phantom Bank 31 Fed Com No. 511H
Project:	Eddy County, New Mexico NAD27 NME	TVD Reference:	RKB=3129+25 @ 3154.00ft
Reference Site:	Phantom Bank 31 Fed Com	MD Reference:	RKB=3129+25 @ 3154.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Phantom Bank 31 Fed Com No. 511H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev2	Offset TVD Reference:	Offset Datum

Offset Design: Phantom Bank 31 Fed Com - Phantom Bank 31 Fed Com No. 561H - Original Hole - rev2												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)			
0.00	0.00	0.00	0.00	0.00	0.00	176.89	-30.00	1.63	30.04				
100.00	100.00	100.00	100.00	0.43	0.43	176.89	-30.00	1.63	30.04	29.19	0.86	35.045	
200.00	200.00	200.00	200.00	1.25	1.25	176.89	-30.00	1.63	30.04	27.54	2.50	11.994	
300.00	300.00	300.00	300.00	1.75	1.75	176.89	-30.00	1.63	30.04	26.55	3.49	8.599	
400.00	400.00	400.00	400.00	2.13	2.13	176.89	-30.00	1.63	30.04	25.78	4.27	7.044	
500.00	500.00	500.00	500.00	2.46	2.46	176.89	-30.00	1.63	30.04	25.12	4.92	6.103	
600.00	600.00	600.00	600.00	2.75	2.75	176.89	-30.00	1.63	30.04	24.54	5.51	5.456	
700.00	700.00	700.00	700.00	3.02	3.02	176.89	-30.00	1.63	30.04	24.01	6.04	4.975	
800.00	800.00	800.00	800.00	3.27	3.27	176.89	-30.00	1.63	30.04	23.51	6.53	4.600	
900.00	900.00	900.00	900.00	3.50	3.50	176.89	-30.00	1.63	30.04	23.05	6.99	4.296	
1,000.00	1,000.00	1,000.00	1,000.00	3.72	3.72	176.89	-30.00	1.63	30.04	22.61	7.43	4.043	
1,100.00	1,100.00	1,100.00	1,100.00	3.92	3.92	176.89	-30.00	1.63	30.04	22.20	7.85	3.829	
1,200.00	1,200.00	1,200.00	1,200.00	4.12	4.12	176.89	-30.00	1.63	30.04	21.80	8.25	3.644	
1,300.00	1,300.00	1,300.00	1,300.00	4.31	4.31	176.89	-30.00	1.63	30.04	21.42	8.63	3.482	
1,400.00	1,400.00	1,400.00	1,400.00	4.50	4.50	176.89	-30.00	1.63	30.04	21.05	9.00	3.339	
1,500.00	1,500.00	1,500.00	1,500.00	4.68	4.68	176.89	-30.00	1.63	30.04	20.69	9.36	3.211	
1,600.00	1,600.00	1,600.00	1,600.00	4.85	4.85	176.89	-30.00	1.63	30.04	20.34	9.70	3.096	
1,700.00	1,700.00	1,700.00	1,700.00	5.02	5.02	176.89	-30.00	1.63	30.04	20.00	10.04	2.992	
1,800.00	1,800.00	1,800.00	1,800.00	5.19	5.19	176.89	-30.00	1.63	30.04	19.67	10.37	2.897	
1,900.00	1,900.00	1,900.00	1,900.00	5.35	5.35	176.89	-30.00	1.63	30.04	19.35	10.69	2.809	
2,000.00	2,000.00	2,000.00	2,000.00	5.50	5.50	176.89	-30.00	1.63	30.04	19.04	11.01	2.729 CC, ES	
2,100.00	2,099.99	2,099.99	2,099.99	5.65	5.66	133.10	-30.00	1.63	30.63	19.32	11.31	2.708	
2,200.00	2,199.96	2,199.96	2,199.96	5.81	5.81	136.46	-30.00	1.63	32.48	20.86	11.61	2.797	
2,300.00	2,299.86	2,299.86	2,299.86	5.98	5.96	141.26	-30.00	1.63	35.77	23.84	11.93	2.999	
2,400.00	2,399.73	2,399.73	2,399.73	6.17	6.10	145.96	-30.00	1.63	39.99	27.74	12.25	3.265	
2,500.00	2,499.59	2,499.59	2,499.59	6.37	6.25	149.74	-30.00	1.63	44.42	31.84	12.58	3.530	
2,600.00	2,599.45	2,599.45	2,599.45	6.58	6.39	152.82	-30.00	1.63	49.01	36.08	12.93	3.791	
2,700.00	2,699.31	2,699.31	2,699.31	6.80	6.53	155.37	-30.00	1.63	53.72	40.44	13.29	4.044	
2,800.00	2,799.18	2,799.18	2,799.18	7.04	6.67	157.50	-30.00	1.63	58.52	44.87	13.65	4.287	
2,900.00	2,899.04	2,899.04	2,899.04	7.28	6.80	159.31	-30.00	1.63	63.39	49.37	14.02	4.520	
3,000.00	2,998.90	2,998.90	2,998.90	7.53	6.94	160.87	-30.00	1.63	68.31	53.91	14.40	4.742	
3,100.00	3,098.77	3,098.77	3,098.77	7.78	7.07	162.21	-30.00	1.63	73.28	58.49	14.79	4.954	
3,200.00	3,198.63	3,198.63	3,198.63	8.05	7.20	163.38	-30.00	1.63	78.28	63.09	15.18	5.155	
3,300.00	3,298.53	3,298.53	3,298.53	8.31	7.33	164.26	-30.00	1.63	82.47	66.90	15.57	5.296	
3,400.00	3,398.50	3,395.99	3,395.97	8.55	7.45	164.20	-31.61	1.63	86.43	70.52	15.91	5.432	
3,500.00	3,498.49	3,493.17	3,493.03	8.72	7.84	-152.14	-36.51	1.63	91.70	75.33	16.37	5.602	
3,600.00	3,598.49	3,590.56	3,590.07	8.83	8.04	-154.34	-44.65	1.63	99.16	82.56	16.60	5.972	
3,700.00	3,698.49	3,690.12	3,689.19	8.93	8.13	-156.51	-54.02	1.63	107.73	90.94	16.79	6.417	
3,800.00	3,798.49	3,789.68	3,788.30	9.04	8.26	-158.35	-63.39	1.63	116.42	99.42	17.01	6.846	
3,900.00	3,898.49	3,889.23	3,887.42	9.14	8.41	-159.94	-72.76	1.63	125.22	107.98	17.24	7.263	
4,000.00	3,998.49	3,988.79	3,986.53	9.24	8.57	-161.32	-82.13	1.63	134.11	116.61	17.49	7.666	
4,100.00	4,098.49	4,088.35	4,085.65	9.35	8.75	-162.53	-91.49	1.63	143.06	125.30	17.76	8.054	
4,200.00	4,198.49	4,187.90	4,184.76	9.45	8.94	-163.59	-100.86	1.63	152.06	134.02	18.04	8.427	
4,300.00	4,298.49	4,287.46	4,283.87	9.55	9.14	-164.54	-110.23	1.63	161.12	142.78	18.34	8.785	
4,400.00	4,398.49	4,387.01	4,382.99	9.65	9.35	-165.38	-119.60	1.63	170.21	151.56	18.65	9.126	
4,500.00	4,498.49	4,486.57	4,482.10	9.75	9.58	-166.14	-128.97	1.63	179.33	160.36	18.97	9.452	
4,600.00	4,598.49	4,586.13	4,581.22	9.86	9.82	-166.82	-138.34	1.63	188.49	169.18	19.31	9.763	
4,700.00	4,698.49	4,685.68	4,680.33	9.96	10.07	-167.45	-147.71	1.63	197.66	178.01	19.65	10.059	
4,800.00	4,798.49	4,785.54	4,779.75	10.06	10.30	-168.00	-157.09	1.59	206.85	186.87	19.98	10.353	
4,900.00	4,898.49	4,887.19	4,881.02	10.16	10.55	-167.93	-165.56	-0.50	215.43	195.09	20.34	10.592	
5,000.00	4,998.49	4,988.19	4,981.65	10.26	10.76	-167.02	-172.42	-5.56	223.15	202.48	20.67	10.795	
5,100.00	5,098.47	5,087.84	5,080.94	10.51	10.98	-100.50	-178.82	-11.25	231.04	209.84	21.19	10.901	

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



FLAT CREEK
RESOURCES

Anticollision Report

Company:	Flat Creek Resources, LLC	Local Co-ordinate Reference:	Well Phantom Bank 31 Fed Com No. 511H
Project:	Eddy County, New Mexico NAD27 NME	TVD Reference:	RKB=3129+25 @ 3154.00ft
Reference Site:	Phantom Bank 31 Fed Com	MD Reference:	RKB=3129+25 @ 3154.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Phantom Bank 31 Fed Com No. 511H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev2	Offset TVD Reference:	Offset Datum

Offset Design:		Phantom Bank 31 Fed Com - Phantom Bank 31 Fed Com No. 561H - Original Hole - rev2											Offset Site Error:		0.00 ft	
Survey Program:		0-MWD						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)						
5,200.00	5,198.33	5,187.47	5,180.19	10.82	11.21	-100.59	-185.22	-16.93	239.58	217.75	21.82	10.978				
5,300.00	5,297.97	5,286.95	5,279.31	10.84	11.46	-101.46	-191.61	-22.61	248.77	226.62	22.15	11.232				
5,400.00	5,397.52	5,386.38	5,378.37	10.89	11.71	-102.58	-197.99	-28.29	258.22	235.73	22.50	11.479				
5,500.00	5,497.07	5,485.81	5,477.43	10.96	11.97	-103.63	-204.38	-33.97	267.77	244.91	22.86	11.714				
5,600.00	5,596.63	5,585.24	5,576.49	11.04	12.23	-104.60	-210.76	-39.64	277.40	254.18	23.23	11.943				
5,700.00	5,696.18	5,684.66	5,675.55	11.13	12.50	-105.51	-217.15	-45.32	287.11	263.51	23.60	12.165				
5,800.00	5,795.74	5,784.09	5,774.61	11.24	12.78	-106.36	-223.53	-51.00	296.88	272.90	23.98	12.381				
5,900.00	5,895.29	5,883.52	5,873.67	11.36	13.06	-107.15	-229.92	-56.67	306.72	282.35	24.36	12.590				
6,000.00	5,994.84	5,982.95	5,972.73	11.49	13.35	-107.90	-236.30	-62.35	316.60	291.86	24.75	12.794				
6,100.00	6,094.40	6,082.38	6,071.79	11.63	13.64	-108.60	-242.69	-68.02	326.54	301.40	25.14	12.990				
6,200.00	6,193.95	6,181.80	6,170.85	11.78	13.94	-109.26	-249.07	-73.70	336.52	310.99	25.53	13.181				
6,300.00	6,293.50	6,281.23	6,269.91	11.94	14.24	-109.88	-255.46	-79.38	346.55	320.62	25.93	13.366				
6,400.00	6,393.06	6,380.66	6,368.97	12.11	14.55	-110.46	-261.84	-85.05	356.61	330.28	26.33	13.544				
6,500.00	6,492.61	6,480.09	6,468.03	12.30	14.86	-111.02	-268.23	-90.73	366.71	339.98	26.73	13.717				
6,600.00	6,592.17	6,579.52	6,567.09	12.49	15.17	-111.54	-274.61	-96.40	376.84	349.70	27.14	13.884				
6,700.00	6,691.72	6,678.94	6,666.15	12.69	15.48	-112.04	-281.00	-102.08	387.00	359.45	27.55	14.045				
6,800.00	6,791.27	6,778.37	6,765.21	12.90	15.80	-112.51	-287.39	-107.76	397.19	369.22	27.97	14.201				
6,900.00	6,890.83	6,877.80	6,864.27	13.12	16.13	-112.96	-293.77	-113.43	407.40	379.01	28.39	14.351				
7,000.00	6,990.38	6,977.23	6,963.33	13.35	16.45	-113.38	-300.16	-119.11	417.64	388.83	28.81	14.496				
7,100.00	7,089.93	7,076.66	7,062.39	13.58	16.78	-113.79	-306.54	-124.79	427.89	398.66	29.23	14.637				
7,200.00	7,189.49	7,176.08	7,161.46	13.83	17.11	-114.17	-312.93	-130.46	438.17	408.51	29.66	14.772				
7,300.00	7,289.10	7,276.43	7,261.43	14.05	17.43	-114.58	-319.36	-136.18	448.20	418.15	30.05	14.914				
7,400.00	7,388.93	7,389.37	7,374.13	14.35	17.82	-114.83	-324.73	-140.96	455.27	424.74	30.53	14.913				
7,500.00	7,488.91	7,502.69	7,487.42	14.66	18.23	-114.92	-326.78	-142.78	457.96	426.97	30.98	14.781				
7,600.00	7,588.91	7,604.18	7,588.91	14.72	18.27	179.32	-326.80	-142.79	457.98	426.90	31.08	14.734				
7,700.00	7,688.91	7,704.18	7,688.91	14.80	18.31	179.32	-326.80	-142.79	457.98	426.78	31.20	14.678				
7,800.00	7,788.91	7,804.18	7,788.91	14.87	18.35	179.32	-326.80	-142.79	457.98	426.66	31.32	14.621				
7,900.00	7,888.91	7,904.18	7,888.91	14.95	18.39	179.32	-326.80	-142.79	457.98	426.54	31.45	14.564				
8,000.00	7,988.91	8,004.18	7,988.91	15.02	18.43	179.32	-326.80	-142.79	457.98	426.41	31.57	14.507				
8,100.00	8,088.91	8,104.18	8,088.91	15.09	18.47	179.32	-326.80	-142.79	457.98	426.29	31.69	14.451				
8,200.00	8,188.91	8,204.18	8,188.91	15.17	18.51	179.32	-326.80	-142.79	457.98	426.17	31.82	14.395				
8,300.00	8,288.91	8,304.18	8,288.91	15.24	18.55	179.32	-326.80	-142.79	457.98	426.04	31.94	14.339				
8,400.00	8,388.91	8,404.18	8,388.91	15.32	18.59	179.32	-326.80	-142.79	457.98	425.92	32.06	14.284				
8,500.00	8,488.91	8,504.18	8,488.91	15.39	18.63	179.32	-326.80	-142.79	457.98	425.80	32.19	14.229				
8,600.00	8,588.91	8,604.18	8,588.91	15.47	18.68	179.32	-326.80	-142.79	457.98	425.67	32.31	14.174				
8,700.00	8,688.91	8,704.18	8,688.91	15.54	18.72	179.32	-326.80	-142.79	457.98	425.55	32.44	14.119				
8,800.00	8,788.91	8,804.18	8,788.91	15.61	18.76	179.32	-326.80	-142.79	457.98	425.42	32.56	14.065				
8,900.00	8,888.91	8,904.18	8,888.91	15.69	18.81	179.32	-326.80	-142.79	457.98	425.30	32.69	14.011				
9,000.00	8,988.91	9,004.18	8,988.91	15.76	18.85	179.32	-326.80	-142.79	457.98	425.17	32.81	13.958				
9,100.00	9,088.91	9,104.18	9,088.91	15.84	18.89	179.32	-326.80	-142.79	457.98	425.04	32.94	13.904				
9,200.00	9,188.91	9,204.18	9,188.91	15.91	18.94	179.32	-326.80	-142.79	457.98	424.92	33.06	13.851				
9,300.00	9,288.91	9,304.18	9,288.91	15.99	18.98	179.32	-326.80	-142.79	457.98	424.79	33.19	13.798				
9,400.00	9,388.91	9,404.18	9,388.91	16.06	19.02	179.32	-326.80	-142.79	457.98	424.66	33.32	13.746				
9,500.00	9,488.91	9,504.18	9,488.91	16.14	19.07	179.32	-326.80	-142.79	457.98	424.54	33.44	13.694				
9,600.00	9,588.91	9,604.18	9,588.91	16.21	19.11	179.32	-326.80	-142.79	457.98	424.41	33.57	13.642				
9,700.00	9,688.91	9,704.18	9,688.91	16.29	19.16	179.32	-326.80	-142.79	457.98	424.28	33.70	13.590				
9,800.00	9,788.91	9,804.18	9,788.91	16.37	19.20	179.32	-326.80	-142.79	457.98	424.16	33.83	13.539				
9,900.00	9,888.91	9,904.18	9,888.91	16.44	19.25	179.32	-326.80	-142.79	457.98	424.03	33.96	13.488				
10,000.00	9,988.91	10,004.18	9,988.91	16.52	19.30	179.32	-326.80	-142.79	457.98	423.90	34.08	13.437				
10,100.00	10,088.91	10,104.18	10,088.91	16.59	19.34	179.32	-326.80	-142.79	457.98	423.77	34.21	13.387				
10,200.00	10,188.91	10,204.18	10,188.91	16.67	19.39	179.32	-326.80	-142.79	457.98	423.64	34.34	13.336				
10,300.00	10,288.91	10,304.18	10,288.91	16.74	19.43	179.32	-326.80	-142.79	457.98	423.51	34.47	13.286				

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



FLAT CREEK
RESOURCES

Anticollision Report

Company:	Flat Creek Resources, LLC	Local Co-ordinate Reference:	Well Phantom Bank 31 Fed Com No. 511H
Project:	Eddy County, New Mexico NAD27 NME	TVD Reference:	RKB=3129+25 @ 3154.00ft
Reference Site:	Phantom Bank 31 Fed Com	MD Reference:	RKB=3129+25 @ 3154.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Phantom Bank 31 Fed Com No. 511H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev2	Offset TVD Reference:	Offset Datum

Offset Design: Phantom Bank 31 Fed Com - Phantom Bank 31 Fed Com No. 561H - Original Hole - rev2													Offset Site Error: 0.00 ft
Survey Program: 0-MWD													Offset Well Error: 0.00 ft
Rule Assigned:													
Measured Depth (ft)	Vertical Depth (ft)	Offset Measured Depth (ft)	Vertical Depth (ft)	Semi Major Axis 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)			
10,400.00	10,388.91	10,404.18	10,388.91	16.82	19.48	179.32	-326.80	-142.79	457.98	423.38	34.60	13.237	
10,500.00	10,488.91	10,504.18	10,488.91	16.89	19.53	179.32	-326.80	-142.79	457.98	423.25	34.73	13.187	
10,600.00	10,588.91	10,604.18	10,588.91	16.97	19.58	179.32	-326.80	-142.79	457.98	423.12	34.86	13.138	
10,700.00	10,688.91	10,704.18	10,688.91	17.05	19.62	179.32	-326.80	-142.79	457.98	422.99	34.99	13.089	
10,800.00	10,788.91	10,804.18	10,788.91	17.12	19.67	179.32	-326.80	-142.79	457.98	422.86	35.12	13.041	
10,900.00	10,888.91	10,904.18	10,888.91	17.20	19.72	179.32	-326.80	-142.79	457.98	422.73	35.25	12.993	
11,000.00	10,988.91	11,004.18	10,988.91	17.27	19.77	179.32	-326.80	-142.79	457.98	422.60	35.38	12.945	
11,100.00	11,088.91	11,104.18	11,088.91	17.35	19.82	179.32	-326.80	-142.79	457.98	422.47	35.51	12.897	
11,200.00	11,188.91	11,204.18	11,188.91	17.43	19.86	179.32	-326.80	-142.79	457.98	422.34	35.64	12.850	
11,204.82	11,193.72	11,209.00	11,193.72	17.43	19.86	179.32	-326.80	-142.79	457.98	422.34	35.65	12.848	
11,300.00	11,288.91	11,304.07	11,288.78	17.50	19.92	179.45	-326.81	-143.83	457.99	422.23	35.76	12.807	
11,400.00	11,388.91	11,401.54	11,385.10	17.58	20.16	-178.79	-327.02	-157.92	458.28	422.32	35.97	12.741	
11,500.00	11,488.90	11,491.90	11,471.09	17.65	20.45	-91.54	-327.41	-185.38	460.41	424.11	36.30	12.685	
11,600.00	11,588.21	11,576.10	11,546.42	17.97	20.75	-87.33	-327.94	-222.83	466.55	429.81	36.74	12.700	
11,700.00	11,684.17	11,656.90	11,612.79	18.46	21.07	-83.28	-328.60	-268.77	476.53	439.14	37.39	12.743	
11,800.00	11,773.87	11,734.98	11,670.19	18.98	21.38	-79.53	-329.36	-321.61	489.35	451.03	38.32	12.769	
11,900.00	11,854.58	11,810.93	11,718.63	19.49	21.71	-76.17	-330.19	-380.03	503.97	464.46	39.51	12.757	
12,000.00	11,923.84	11,885.22	11,758.14	19.96	22.07	-73.27	-331.09	-442.88	519.41	478.50	40.91	12.695	
12,100.00	11,979.56	11,958.28	11,788.75	20.39	22.49	-70.75	-332.04	-509.16	534.80	492.32	42.48	12.589	
12,200.00	12,020.29	12,030.62	11,810.50	20.88	22.99	-68.13	-333.03	-578.09	547.29	503.06	44.23	12.375	
12,300.00	12,044.96	12,100.00	11,823.06	21.68	23.58	-66.65	-334.00	-646.28	555.03	508.95	46.08	12.045	
12,400.00	12,052.83	12,178.02	11,827.22	22.89	24.39	-66.14	-335.12	-724.12	557.78	509.59	48.19	11.575	
12,435.26	12,052.54	12,208.19	11,826.77	23.41	24.74	-66.13	-335.55	-754.28	557.90	508.88	49.02	11.381	
12,500.00	12,051.38	12,272.92	11,825.82	24.38	25.59	-66.14	-336.47	-819.00	557.77	507.01	50.76	10.989	
12,600.00	12,049.92	12,372.92	11,824.35	26.06	27.08	-66.14	-337.90	-918.98	557.77	504.15	53.62	10.403	
12,700.00	12,048.46	12,472.92	11,822.88	27.87	28.74	-66.14	-339.33	-1,018.96	557.77	501.08	56.69	9.838	
12,800.00	12,046.99	12,572.92	11,821.41	29.77	30.53	-66.14	-340.76	-1,118.94	557.77	497.82	59.95	9.304	
12,900.00	12,045.53	12,672.92	11,819.94	31.75	32.42	-66.14	-342.19	-1,218.92	557.77	494.41	63.36	8.803	
13,000.00	12,044.07	12,772.92	11,818.47	33.80	34.38	-66.14	-343.62	-1,318.89	557.77	490.87	66.90	8.337	
13,100.00	12,042.60	12,872.92	11,817.00	35.89	36.42	-66.14	-345.05	-1,418.87	557.77	487.22	70.56	7.905	
13,200.00	12,041.14	12,972.92	11,815.53	38.03	38.50	-66.14	-346.48	-1,518.85	557.77	483.47	74.30	7.507	
13,300.00	12,039.68	13,072.92	11,814.06	40.20	40.62	-66.14	-347.91	-1,618.83	557.77	479.65	78.13	7.139	
13,400.00	12,038.22	13,172.92	11,812.59	42.40	42.79	-66.14	-349.34	-1,718.81	557.77	475.75	82.02	6.800	
13,500.00	12,036.75	13,272.92	11,811.12	44.63	44.98	-66.14	-350.77	-1,818.79	557.77	471.80	85.98	6.488	
13,600.00	12,035.29	13,372.92	11,809.65	46.87	47.19	-66.14	-352.20	-1,918.77	557.77	467.79	89.98	6.199	
13,700.00	12,033.83	13,472.92	11,808.18	49.14	49.43	-66.13	-353.63	-2,018.75	557.77	463.74	94.03	5.932	
13,800.00	12,032.36	13,572.92	11,806.71	51.42	51.68	-66.13	-355.06	-2,118.73	557.77	459.65	98.12	5.684	
13,900.00	12,030.90	13,672.92	11,805.24	53.72	53.96	-66.13	-356.49	-2,218.71	557.77	455.53	102.25	5.455	
14,000.00	12,029.44	13,772.92	11,803.77	56.02	56.24	-66.13	-357.92	-2,318.68	557.78	451.37	106.41	5.242	
14,100.00	12,027.98	13,872.92	11,802.30	58.34	58.54	-66.13	-359.35	-2,418.66	557.78	447.19	110.59	5.044	
14,200.00	12,026.51	13,972.92	11,800.83	60.67	60.85	-66.13	-360.78	-2,518.64	557.78	442.98	114.80	4.859	
14,300.00	12,025.05	14,072.92	11,799.36	63.01	63.17	-66.13	-362.22	-2,618.62	557.78	438.75	119.03	4.686	
14,400.00	12,023.59	14,172.92	11,797.89	65.35	65.50	-66.13	-363.65	-2,718.60	557.78	434.50	123.27	4.525	
14,500.00	12,022.12	14,272.92	11,796.42	67.70	67.84	-66.13	-365.08	-2,818.58	557.78	430.24	127.54	4.373	
14,600.00	12,020.66	14,372.92	11,794.95	70.06	70.18	-66.13	-366.51	-2,918.56	557.78	425.95	131.82	4.231	
14,700.00	12,019.20	14,472.92	11,793.48	72.42	72.53	-66.13	-367.94	-3,018.54	557.78	421.66	136.12	4.098	
14,800.00	12,017.74	14,572.92	11,792.01	74.79	74.89	-66.13	-369.37	-3,118.52	557.78	417.35	140.43	3.972	
14,900.00	12,016.27	14,672.92	11,790.54	77.16	77.25	-66.13	-370.80	-3,218.49	557.78	413.03	144.75	3.853	
15,000.00	12,014.81	14,772.92	11,789.07	79.54	79.61	-66.12	-372.23	-3,318.47	557.78	408.70	149.08	3.741	
15,100.00	12,013.35	14,872.92	11,787.60	81.92	81.98	-66.12	-373.66	-3,418.45	557.78	404.36	153.42	3.636	
15,200.00	12,011.88	14,972.92	11,786.13	84.30	84.36	-66.12	-375.09	-3,518.43	557.78	400.01	157.77	3.535	
15,300.00	12,010.42	15,072.92	11,784.66	86.69	86.74	-66.12	-376.52	-3,618.41	557.78	395.65	162.13	3.440	

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

FLAT CREEK
RESOURCES

Anticollision Report

Company:	Flat Creek Resources, LLC	Local Co-ordinate Reference:	Well Phantom Bank 31 Fed Com No. 511H
Project:	Eddy County, New Mexico NAD27 NME	TVD Reference:	RKB=3129+25 @ 3154.00ft
Reference Site:	Phantom Bank 31 Fed Com	MD Reference:	RKB=3129+25 @ 3154.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Phantom Bank 31 Fed Com No. 511H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev2	Offset TVD Reference:	Offset Datum

Offset Design: Phantom Bank 31 Fed Com - Phantom Bank 31 Fed Com No. 561H - Original Hole - rev2													Offset Site Error: 0.00 ft	
Survey Program: 0-MWD												Offset Well Error: 0.00 ft		
Reference		Offset		Semi Major Axis			Offset Wellbore Centre			Rule Assigned: 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		
15,400.00	12,008.96	15,172.92	11,783.19	89.07	89.12	-66.12	-377.95	-3,718.39	557.78	391.28	166.50	3.350		
15,500.00	12,007.50	15,272.92	11,781.72	91.47	91.50	-66.12	-379.38	-3,818.37	557.78	386.91	170.87	3.264		
15,600.00	12,006.03	15,372.92	11,780.25	93.86	93.89	-66.12	-380.81	-3,918.35	557.78	382.53	175.25	3.183		
15,700.00	12,004.57	15,472.92	11,778.78	96.26	96.28	-66.12	-382.24	-4,018.33	557.78	378.14	179.64	3.105		
15,800.00	12,003.11	15,572.92	11,777.31	98.66	98.67	-66.12	-383.67	-4,118.31	557.78	373.75	184.03	3.031		
15,900.00	12,001.64	15,672.92	11,775.84	101.06	101.07	-66.12	-385.10	-4,218.28	557.78	369.35	188.43	2.960		
16,000.00	12,000.18	15,772.92	11,774.37	103.46	103.46	-66.12	-386.53	-4,318.26	557.78	364.95	192.83	2.893		
16,100.00	11,998.72	15,872.92	11,772.90	105.86	105.86	-66.12	-387.96	-4,418.24	557.78	360.54	197.24	2.828		
16,200.00	11,997.26	15,972.92	11,771.43	108.27	108.26	-66.12	-389.39	-4,518.22	557.78	356.13	201.65	2.766		
16,300.00	11,995.79	16,072.92	11,769.96	110.68	110.66	-66.11	-390.82	-4,618.20	557.78	351.72	206.06	2.707		
16,400.00	11,994.33	16,172.92	11,768.49	113.09	113.07	-66.11	-392.25	-4,718.18	557.78	347.30	210.48	2.650		
16,500.00	11,992.87	16,272.92	11,767.02	115.50	115.47	-66.11	-393.68	-4,818.16	557.78	342.88	214.90	2.596		
16,600.00	11,991.41	16,372.92	11,765.55	117.91	117.88	-66.11	-395.11	-4,918.14	557.78	338.46	219.33	2.543		
16,700.00	11,989.94	16,472.92	11,764.08	120.32	120.29	-66.11	-396.54	-5,018.12	557.78	334.03	223.75	2.493		
16,800.00	11,988.48	16,572.92	11,762.61	122.73	122.70	-66.11	-397.97	-5,118.10	557.78	329.60	228.19	2.444		
16,900.00	11,987.02	16,672.92	11,761.14	125.15	125.11	-66.11	-399.40	-5,218.07	557.78	325.16	232.62	2.398		
17,000.00	11,985.55	16,772.92	11,759.67	127.56	127.52	-66.11	-400.83	-5,318.05	557.78	320.73	237.06	2.353		
17,100.00	11,984.09	16,872.92	11,758.21	129.98	129.93	-66.11	-402.26	-5,418.03	557.78	316.29	241.49	2.310		
17,175.07	11,982.99	16,948.00	11,757.10	131.79	131.74	-66.11	-403.33	-5,493.09	557.78	312.96	244.82	2.278	SF	

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



FLAT CREEK
RESOURCES

Anticollision Report

Company:	Flat Creek Resources, LLC	Local Co-ordinate Reference:	Well Phantom Bank 31 Fed Com No. 511H
Project:	Eddy County, New Mexico NAD27 NME	TVD Reference:	RKB=3129+25 @ 3154.00ft
Reference Site:	Phantom Bank 31 Fed Com	MD Reference:	RKB=3129+25 @ 3154.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Phantom Bank 31 Fed Com No. 511H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev2	Offset TVD Reference:	Offset Datum

Offset Design: Phantom Bank 31 Fed Com - Phantom Bank 31 Fed Com No. 701H - Original Hole - Surveys Original Hole													Offset Site Error:	0.00 ft
Survey Program: 176-MWD, 1175-MWD, 9827-MWD, 15717-MWD													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 (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	1.50	1.50	0.00	0.01	-54.50	70.55	-98.90	121.49					
100.00	100.00	101.29	101.29	0.43	0.60	-54.57	70.47	-99.06	121.57	120.55	1.02	118.627		
200.00	200.00	201.13	201.13	1.25	1.23	-54.78	70.26	-99.53	121.83	119.36	2.47	49.316		
300.00	300.00	301.10	301.10	1.75	1.96	-54.97	70.09	-100.01	122.13	118.44	3.69	33.137		
400.00	400.00	400.38	400.37	2.13	2.65	-55.11	70.21	-100.69	122.75	118.00	4.75	25.840 ES		
500.00	500.00	499.72	499.71	2.46	3.24	-55.21	70.72	-101.78	123.95	118.29	5.67	21.869		
600.00	600.00	599.06	599.03	2.75	3.59	-55.13	71.79	-103.03	125.60	119.29	6.31	19.900		
700.00	700.00	697.93	697.87	3.02	4.06	-54.91	73.56	-104.69	128.00	120.93	7.06	18.122		
800.00	800.00	797.48	797.37	3.27	4.44	-54.52	76.08	-106.73	131.13	123.44	7.69	17.046		
900.00	900.00	897.66	897.48	3.50	4.68	-53.74	79.33	-108.15	134.19	126.02	8.17	16.428		
1,000.00	1,000.00	997.23	996.98	3.72	4.87	-52.75	83.01	-109.15	137.20	128.62	8.58	15.985		
1,100.00	1,100.00	1,095.07	1,094.73	3.92	5.11	-52.10	86.68	-111.35	141.27	132.24	9.03	15.644		
1,200.00	1,200.00	1,194.37	1,193.88	4.12	5.33	-51.69	90.75	-114.85	146.58	137.13	9.44	15.524		
1,300.00	1,300.00	1,297.59	1,297.02	4.31	5.58	-51.58	93.42	-117.79	150.41	140.52	9.89	15.208		
1,400.00	1,400.00	1,399.03	1,398.43	4.50	5.81	-51.52	95.25	-119.83	153.10	142.80	10.31	14.853		
1,500.00	1,500.00	1,501.77	1,501.16	4.68	5.97	-51.47	96.00	-120.55	154.10	143.45	10.65	14.470		
1,600.00	1,600.00	1,603.16	1,602.55	4.85	6.06	-51.41	95.92	-120.20	153.79	142.87	10.92	14.089		
1,700.00	1,700.00	1,703.19	1,702.58	5.02	6.15	-51.48	95.28	-119.68	152.98	141.81	11.17	13.701		
1,800.00	1,800.00	1,803.11	1,802.49	5.19	6.24	-51.77	94.29	-119.68	152.37	140.94	11.42	13.340		
1,900.00	1,900.00	1,904.44	1,903.81	5.35	6.33	-52.20	92.78	-119.62	151.40	139.73	11.68	12.968		
2,000.00	2,000.00	2,006.22	2,005.56	5.50	6.43	-52.60	90.63	-118.54	149.27	137.35	11.93	12.517		
2,100.00	2,099.99	2,106.99	2,106.28	5.65	6.53	-98.35	87.99	-116.68	146.34	134.17	12.17	12.021		
2,200.00	2,199.96	2,204.95	2,204.20	5.81	6.64	-99.75	85.66	-115.11	144.06	131.62	12.43	11.587		
2,262.05	2,261.96	2,265.45	2,264.69	5.92	6.72	-100.83	84.94	-114.59	143.64	131.05	12.60	11.404		
2,300.00	2,299.86	2,302.45	2,301.69	5.98	6.76	-101.55	84.80	-114.44	143.80	131.11	12.69	11.328		
2,400.00	2,399.73	2,402.35	2,401.59	6.17	6.87	-103.66	84.53	-114.39	144.76	131.82	12.94	11.185		
2,500.00	2,499.59	2,501.94	2,501.17	6.37	6.98	-105.93	83.81	-114.63	145.94	132.76	13.18	11.070		
2,600.00	2,599.45	2,601.81	2,601.04	6.58	7.08	-108.31	82.82	-115.10	147.43	134.01	13.42	10.982		
2,700.00	2,699.31	2,701.82	2,701.03	6.80	7.20	-110.86	81.25	-115.68	149.04	135.37	13.67	10.905		
2,800.00	2,799.18	2,800.85	2,800.06	7.04	7.30	-113.10	80.32	-116.17	151.09	137.18	13.91	10.865		
2,900.00	2,899.04	2,899.57	2,898.77	7.28	7.36	-114.93	80.49	-117.06	154.13	139.99	14.14	10.900		
3,000.00	2,998.90	2,999.86	2,999.06	7.53	7.43	-116.63	80.91	-117.96	157.40	143.01	14.39	10.938		
3,100.00	3,098.77	3,100.64	3,099.84	7.78	7.51	-118.39	80.94	-118.67	160.50	145.85	14.65	10.956		
3,200.00	3,198.63	3,203.41	3,202.61	8.05	7.63	-120.20	80.38	-118.30	162.57	147.64	14.93	10.888		
3,300.00	3,298.53	3,303.89	3,303.05	8.31	7.82	-121.93	78.76	-116.42	162.62	147.34	15.27	10.648		
3,400.00	3,398.50	3,404.23	3,403.38	8.55	8.03	-122.84	78.07	-115.01	162.49	146.87	15.62	10.401		
3,500.00	3,498.49	3,508.18	3,507.26	8.72	8.27	-78.50	76.22	-111.99	159.77	143.80	15.97	10.006		
3,600.00	3,598.49	3,610.76	3,609.66	8.83	8.52	-79.42	72.66	-106.88	154.21	137.93	16.28	9.474		
3,700.00	3,698.49	3,707.02	3,705.75	8.93	8.72	-79.90	70.48	-101.91	148.74	132.13	16.61	8.957		
3,800.00	3,798.49	3,802.20	3,800.88	9.04	9.07	-79.07	72.18	-99.44	146.51	129.36	17.14	8.546		
3,817.81	3,816.30	3,819.14	3,817.80	9.06	9.15	-78.74	73.00	-99.22	146.45	129.21	17.25	8.491		
3,900.00	3,898.49	3,898.69	3,897.18	9.14	9.49	-76.81	78.01	-98.92	147.24	129.50	17.74	8.301		
4,000.00	3,998.49	3,997.09	3,995.30	9.24	9.62	-74.07	85.53	-99.64	149.87	131.89	17.98	8.335		
4,100.00	4,098.49	4,095.96	4,093.86	9.35	9.66	-71.47	93.13	-100.97	153.45	135.33	18.12	8.470		
4,200.00	4,198.49	4,195.78	4,193.38	9.45	9.71	-69.09	100.61	-102.65	157.58	139.33	18.25	8.635		
4,300.00	4,298.49	4,295.72	4,293.06	9.55	9.76	-66.96	107.69	-104.36	161.82	143.44	18.39	8.802		
4,400.00	4,398.49	4,396.21	4,393.32	9.65	9.81	-65.09	114.25	-105.99	165.96	147.43	18.53	8.957		
4,500.00	4,498.49	4,495.73	4,492.65	9.75	9.87	-63.51	120.23	-107.72	170.14	151.46	18.68	9.110		
4,600.00	4,598.49	4,595.02	4,591.76	9.86	9.94	-62.13	125.91	-109.74	174.56	155.73	18.84	9.268		
4,700.00	4,698.49	4,692.92	4,689.35	9.96	10.03	-60.37	133.26	-111.80	180.02	161.01	19.01	9.468		
4,800.00	4,798.49	4,793.37	4,789.47	10.06	10.13	-58.57	141.11	-113.84	185.75	166.55	19.21	9.672		
4,900.00	4,898.49	4,892.84	4,888.66	10.16	10.22	-57.08	148.31	-116.09	191.53	172.15	19.39	9.879		

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



FLAT CREEK
RESOURCES

Anticollision Report

Company:	Flat Creek Resources, LLC	Local Co-ordinate Reference:	Well Phantom Bank 31 Fed Com No. 511H
Project:	Eddy County, New Mexico NAD27 NME	TVD Reference:	RKB=3129+25 @ 3154.00ft
Reference Site:	Phantom Bank 31 Fed Com	MD Reference:	RKB=3129+25 @ 3154.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Phantom Bank 31 Fed Com No. 511H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev2	Offset TVD Reference:	Offset Datum

Offset Design: Phantom Bank 31 Fed Com - Phantom Bank 31 Fed Com No. 701H - Original Hole - Surveys Original Hole													Offset Site Error:	0.00 ft
Survey Program: 176-MWD, 1175-MWD, 9827-MWD, 15717-MWD													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		
5,000.00	4,998.49	4,992.64	4,988.18	10.26	10.31	-55.75	155.39	-118.60	197.56	177.98	19.58	10.088		
5,100.00	5,098.47	5,092.98	5,088.20	10.51	10.41	11.58	163.03	-120.41	201.75	181.95	19.80	10.188		
5,200.00	5,198.33	5,192.65	5,187.52	10.82	10.52	13.64	171.49	-121.45	202.64	182.41	20.23	10.015		
5,300.00	5,297.97	5,292.55	5,287.06	10.84	10.63	15.89	179.83	-122.63	200.56	180.07	20.50	9.785		
5,400.00	5,397.52	5,393.02	5,387.20	10.89	10.76	18.19	187.77	-123.82	197.65	176.92	20.73	9.535		
5,500.00	5,497.07	5,493.58	5,487.51	10.96	10.89	20.32	194.83	-125.19	194.55	173.55	21.01	9.262		
5,600.00	5,596.63	5,593.61	5,587.32	11.04	11.03	22.36	201.24	-126.68	191.39	170.07	21.32	8.979		
5,700.00	5,696.18	5,693.47	5,686.96	11.13	11.19	24.53	207.74	-127.94	188.39	166.73	21.65	8.700		
5,800.00	5,795.74	5,793.94	5,787.17	11.24	11.35	27.18	214.94	-128.08	185.48	163.46	22.02	8.421		
5,900.00	5,895.29	5,894.40	5,887.39	11.36	11.51	29.98	221.88	-127.72	182.48	160.06	22.42	8.140		
6,000.00	5,994.84	5,994.70	5,987.49	11.49	11.69	32.72	228.14	-127.52	179.45	156.62	22.83	7.860		
6,100.00	6,094.40	6,095.66	6,088.30	11.63	11.88	35.38	233.65	-127.48	176.24	152.98	23.26	7.578		
6,200.00	6,193.95	6,192.77	6,185.22	11.78	12.10	38.33	239.67	-126.78	173.77	150.05	23.72	7.326		
6,300.00	6,293.50	6,292.11	6,284.27	11.94	12.33	41.87	247.13	-125.19	172.63	148.43	24.20	7.134		
6,400.00	6,393.06	6,392.79	6,384.69	12.11	12.56	45.30	254.12	-123.95	171.77	147.11	24.66	6.966		
6,500.00	6,492.61	6,492.47	6,484.17	12.30	12.79	48.58	260.42	-122.98	171.00	145.89	25.11	6.811		
6,531.20	6,523.68	6,523.07	6,514.71	12.36	12.86	49.54	262.36	-122.88	170.94	145.69	25.25	6.770		
6,600.00	6,592.17	6,590.91	6,582.40	12.49	13.03	51.46	266.77	-123.23	171.22	145.66	25.56	6.700		
6,700.00	6,691.72	6,690.71	6,681.99	12.69	13.30	54.23	273.39	-123.95	172.16	146.16	26.00	6.622		
6,800.00	6,791.27	6,791.40	6,782.48	12.90	13.56	57.04	279.66	-124.42	173.05	146.63	26.42	6.550		
6,900.00	6,890.83	6,891.90	6,882.81	13.12	13.83	59.74	285.37	-125.06	173.83	147.00	26.82	6.481		
7,000.00	6,990.38	6,992.41	6,983.18	13.35	14.09	62.44	290.60	-125.60	174.50	147.30	27.20	6.416		
7,100.00	7,089.93	7,093.39	7,084.05	13.58	14.36	65.11	295.30	-126.15	174.99	147.46	27.54	6.355		
7,200.00	7,189.49	7,196.45	7,187.04	13.83	14.62	67.84	298.84	-126.72	174.66	146.83	27.83	6.276		
7,300.00	7,289.10	7,298.83	7,289.41	14.05	14.83	70.24	300.24	-127.72	172.81	144.80	28.01	6.170		
7,400.00	7,388.93	7,399.31	7,389.88	14.35	14.98	71.52	300.78	-129.11	171.38	143.21	28.17	6.083		
7,500.00	7,488.91	7,499.92	7,490.48	14.66	15.09	71.78	301.07	-130.29	170.87	142.53	28.34	6.029		
7,600.00	7,588.91	7,600.21	7,590.77	14.72	15.18	5.68	301.03	-131.34	170.72	142.26	28.46	5.999		
7,700.00	7,688.91	7,700.69	7,691.25	14.80	15.23	5.31	300.78	-132.47	170.37	141.81	28.56	5.965		
7,800.00	7,788.91	7,800.56	7,791.11	14.87	15.20	5.23	300.36	-132.74	169.92	141.31	28.61	5.939		
7,900.00	7,888.91	7,900.89	7,891.43	14.95	15.11	5.42	299.76	-132.23	169.37	140.76	28.62	5.919		
8,000.00	7,988.91	7,999.99	7,990.53	15.02	15.05	5.52	299.40	-131.97	169.03	140.38	28.65	5.900		
8,014.60	8,003.50	8,014.46	8,005.00	15.03	15.05	5.53	299.39	-131.94	169.03	140.36	28.67	5.896		
8,100.00	8,088.91	8,099.27	8,089.81	15.09	15.05	5.72	299.52	-131.39	169.21	140.45	28.76	5.884		
8,200.00	8,188.91	8,199.00	8,189.54	15.17	15.11	6.00	299.80	-130.50	169.58	140.66	28.92	5.863		
8,300.00	8,288.91	8,297.54	8,288.08	15.24	15.21	6.27	300.57	-129.64	170.45	141.31	29.14	5.849		
8,400.00	8,388.91	8,395.03	8,385.53	15.32	15.37	6.71	302.41	-128.10	172.51	143.12	29.40	5.869		
8,500.00	8,488.91	8,493.07	8,483.49	15.39	15.57	7.15	305.72	-126.34	176.07	146.38	29.69	5.930		
8,600.00	8,588.91	8,594.77	8,585.08	15.47	15.84	6.27	309.81	-128.61	179.82	149.69	30.13	5.968		
8,700.00	8,688.91	8,697.72	8,687.87	15.54	16.18	4.59	312.34	-133.71	181.79	151.15	30.64	5.933		
8,800.00	8,788.91	8,800.01	8,790.14	15.61	16.43	4.36	313.26	-134.37	182.64	151.68	30.96	5.899		
8,900.00	8,888.91	8,901.66	8,891.79	15.69	16.46	4.69	312.75	-133.35	182.22	151.15	31.07	5.865		
9,000.00	8,988.91	9,001.33	8,991.45	15.76	16.38	4.71	311.97	-133.33	181.44	150.37	31.07	5.839		
9,100.00	9,088.91	9,100.67	9,090.79	15.84	16.34	4.66	311.61	-133.53	181.06	149.96	31.11	5.821		
9,200.00	9,188.91	9,201.26	9,191.38	15.91	16.35	4.42	311.36	-134.31	180.75	149.57	31.18	5.796		
9,300.00	9,288.91	9,302.03	9,292.14	15.99	16.33	4.06	310.68	-135.49	180.00	148.76	31.24	5.762		
9,400.00	9,388.91	9,402.22	9,392.32	16.06	16.26	3.92	309.69	-136.02	178.97	147.73	31.24	5.729		
9,500.00	9,488.91	9,501.08	9,491.18	16.14	16.18	3.87	308.95	-136.20	178.21	146.97	31.24	5.705		
9,600.00	9,588.91	9,600.87	9,590.97	16.21	16.12	3.91	308.57	-136.11	177.84	146.57	31.26	5.688		
9,700.00	9,688.91	9,700.75	9,690.85	16.29	16.07	4.02	308.25	-135.79	177.54	146.24	31.30	5.672		
9,800.00	9,788.91	9,800.55	9,790.64	16.37	16.05	4.23	308.06	-135.16	177.39	146.02	31.37	5.655		
9,900.00	9,888.91	9,901.75	9,891.80	16.44	18.60	3.83	307.89	-136.40	177.14	143.10	34.05	5.203		

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

FLAT CREEK
RESOURCES

Anticollision Report

Company:	Flat Creek Resources, LLC	Local Co-ordinate Reference:	Well Phantom Bank 31 Fed Com No. 511H
Project:	Eddy County, New Mexico NAD27 NME	TVD Reference:	RKB=3129+25 @ 3154.00ft
Reference Site:	Phantom Bank 31 Fed Com	MD Reference:	RKB=3129+25 @ 3154.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Phantom Bank 31 Fed Com No. 511H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev2	Offset TVD Reference:	Offset Datum

Offset Design: Phantom Bank 31 Fed Com - Phantom Bank 31 Fed Com No. 701H - Original Hole - Surveys Original Hole												Offset Site Error:	0.00 ft
Survey Program: 176-MWD, 1175-MWD, 9827-MWD, 15717-MWD												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 (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
9,972.32	9,961.22	9,973.46	9,962.72	16.50	21.71	0.58	307.71	-146.44	176.57	139.16	37.41	4.720	
10,000.00	9,988.91	9,999.03	9,987.32	16.52	22.79	-1.67	307.84	-153.41	176.79	138.15	38.63	4.576	
10,100.00	10,088.91	10,087.37	10,068.08	16.59	24.21	-12.91	308.79	-188.97	183.61	142.97	40.64	4.517 SF	
10,200.00	10,188.91	10,176.60	10,144.94	16.67	24.53	-25.97	307.37	-234.09	201.22	159.62	41.60	4.837	
10,300.00	10,288.91	10,245.73	10,198.65	16.74	24.98	-37.27	300.25	-276.93	231.46	188.53	42.93	5.392	
10,400.00	10,388.91	10,294.91	10,233.20	16.82	25.42	-44.86	295.27	-311.54	279.84	235.24	44.60	6.274	
10,500.00	10,488.91	10,312.00	10,244.45	16.89	25.58	-47.28	293.76	-324.32	343.42	297.74	45.69	7.517	
10,600.00	10,588.91	10,358.68	10,272.33	16.97	26.06	-53.15	291.09	-361.62	415.07	367.57	47.51	8.737	
10,700.00	10,688.91	10,406.00	10,295.60	17.05	26.55	-57.87	291.03	-402.78	496.21	446.83	49.38	10.048	
10,800.00	10,788.91	10,406.00	10,295.60	17.12	26.55	-57.87	291.03	-402.78	578.95	529.18	49.77	11.633	
10,900.00	10,888.91	10,406.00	10,295.60	17.20	26.55	-57.87	291.03	-402.78	666.45	616.42	50.02	13.322	
11,000.00	10,988.91	10,435.64	10,307.82	17.27	26.86	-60.25	292.03	-429.76	755.69	704.49	51.19	14.761	
11,100.00	11,088.91	10,451.25	10,313.70	17.35	27.02	-61.37	292.71	-444.21	846.74	794.81	51.93	16.306	
11,200.00	11,188.91	10,464.98	10,318.55	17.43	27.17	-62.28	293.40	-457.03	939.05	886.44	52.61	17.850	
11,300.00	11,288.91	10,499.00	10,329.25	17.50	27.53	-64.27	295.47	-489.25	1,033.01	979.06	53.95	19.148	
11,400.00	11,388.91	10,499.00	10,329.25	17.58	27.53	-64.27	295.47	-489.25	1,126.65	1,072.45	54.20	20.786	
11,500.00	11,488.91	10,499.00	10,329.25	17.65	27.53	18.48	295.47	-489.25	1,221.27	1,166.81	54.46	22.427	
11,600.00	11,588.91	10,499.00	10,329.25	17.97	27.53	12.26	295.47	-489.25	1,313.22	1,258.51	54.71	24.003	
11,700.00	11,684.17	10,537.12	10,339.46	18.46	27.88	8.69	297.57	-525.91	1,397.82	1,342.28	55.53	25.171	
11,800.00	11,773.87	10,564.06	10,345.81	18.98	28.13	6.81	298.44	-552.08	1,473.92	1,417.76	56.16	26.246	
11,900.00	11,854.58	10,593.00	10,351.81	19.49	28.40	5.62	298.80	-580.39	1,539.87	1,483.10	56.77	27.123	
12,000.00	11,923.84	10,632.20	10,358.78	19.96	28.81	4.76	298.69	-618.96	1,594.37	1,537.10	57.27	27.840	
12,100.00	11,979.56	10,686.00	10,366.38	20.39	29.38	4.13	297.89	-672.21	1,636.51	1,578.70	57.81	28.308	
12,200.00	12,020.29	10,734.98	10,372.05	20.88	29.90	4.05	296.89	-720.85	1,665.17	1,607.11	58.06	28.680	
12,300.00	12,044.96	10,808.20	10,379.70	21.68	30.72	4.02	295.58	-793.66	1,679.14	1,620.61	58.53	28.688	
12,400.00	12,052.83	10,874.00	10,385.46	22.89	31.51	4.13	293.82	-859.18	1,678.10	1,619.18	58.91	28.484	
12,500.00	12,051.38	10,874.00	10,385.46	24.38	31.51	4.14	293.82	-859.18	1,672.01	1,613.40	58.61	28.525	
12,600.00	12,049.92	10,931.66	10,387.47	26.06	32.27	4.12	292.17	-916.76	1,668.32	1,609.47	58.86	28.346	
12,605.95	12,049.83	10,933.33	10,387.45	26.17	32.29	4.12	292.13	-918.43	1,668.30	1,609.45	58.85	28.350	
12,700.00	12,048.46	10,967.00	10,386.18	27.87	32.74	4.11	291.41	-952.07	1,669.95	1,611.16	58.79	28.406	
12,800.00	12,046.99	11,030.00	10,381.94	29.77	33.64	4.08	289.86	-1,014.90	1,674.84	1,615.76	59.07	28.352	
12,900.00	12,045.53	11,204.22	10,374.36	31.75	36.38	4.07	287.42	-1,188.88	1,677.43	1,616.96	60.47	27.739	
13,000.00	12,044.07	11,367.73	10,372.36	33.80	39.27	4.16	287.81	-1,352.33	1,677.76	1,616.13	61.63	27.222	
13,100.00	12,042.60	11,475.08	10,374.45	35.89	41.26	4.03	282.01	-1,459.51	1,674.02	1,611.74	62.28	26.878	
13,200.00	12,041.14	11,529.00	10,374.66	38.03	42.26	3.93	278.36	-1,513.30	1,672.01	1,609.56	62.44	26.777	
13,232.34	12,040.67	11,554.79	10,374.36	38.73	42.74	3.88	276.62	-1,539.02	1,671.83	1,609.23	62.59	26.709	
13,300.00	12,039.68	11,591.56	10,373.37	40.20	43.43	3.82	274.35	-1,575.72	1,672.45	1,609.72	62.73	26.662	
13,400.00	12,038.22	11,666.06	10,369.77	42.40	44.85	3.71	270.13	-1,650.00	1,675.41	1,612.28	63.13	26.538	
13,500.00	12,036.75	11,825.62	10,363.54	44.63	47.97	3.43	259.90	-1,809.10	1,677.86	1,613.45	64.40	26.053	
13,501.27	12,036.73	11,793.10	10,364.42	44.66	47.33	3.48	261.82	-1,776.65	1,677.83	1,613.75	64.08	26.185	
13,600.00	12,035.29	11,937.77	10,360.64	46.87	50.24	3.32	255.03	-1,921.09	1,678.99	1,613.70	65.28	25.719	
13,700.00	12,033.83	12,052.49	10,361.17	49.14	52.64	3.30	252.67	-2,035.75	1,676.94	1,610.61	66.33	25.283	
13,800.00	12,032.36	12,219.21	10,364.95	51.42	56.24	3.65	260.30	-2,202.19	1,673.83	1,605.80	68.02	24.607	
13,900.00	12,030.90	12,292.60	10,367.77	53.72	57.82	3.84	264.39	-2,275.41	1,668.96	1,600.28	68.69	24.299	
14,000.00	12,029.44	12,371.00	10,369.87	56.02	59.51	4.03	268.75	-2,353.66	1,665.34	1,595.99	69.36	24.010	
14,100.00	12,027.98	12,433.32	10,370.42	58.34	60.86	4.18	272.08	-2,415.89	1,663.55	1,593.65	69.90	23.799	
14,116.46	12,027.74	12,443.00	10,370.36	58.73	61.07	4.20	272.56	-2,425.55	1,663.49	1,593.51	69.98	23.770	
14,200.00	12,026.51	12,497.84	10,369.34	60.67	62.27	4.31	274.97	-2,480.33	1,664.16	1,593.68	70.47	23.614	
14,300.00	12,025.05	12,572.81	10,366.65	63.01	63.91	4.43	277.44	-2,555.20	1,666.61	1,595.43	71.17	23.417	
14,400.00	12,023.59	12,701.48	10,361.67	65.35	66.76	4.64	281.93	-2,683.70	1,669.55	1,597.06	72.49	23.031	
14,500.00	12,022.12	12,838.00	10,361.26	67.70	69.82	4.84	285.84	-2,820.14	1,668.35	1,594.41	73.94	22.564	
14,600.00	12,020.66	12,931.00	10,360.33	70.06	71.94	4.85	284.64	-2,913.12	1,667.89	1,592.97	74.92	22.263	

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

FLAT CREEK
RESOURCES

Anticollision Report

Company:	Flat Creek Resources, LLC	Local Co-ordinate Reference:	Well Phantom Bank 31 Fed Com No. 511H
Project:	Eddy County, New Mexico NAD27 NME	TVD Reference:	RKB=3129+25 @ 3154.00ft
Reference Site:	Phantom Bank 31 Fed Com	MD Reference:	RKB=3129+25 @ 3154.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Phantom Bank 31 Fed Com No. 511H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev2	Offset TVD Reference:	Offset Datum

Offset Design: Phantom Bank 31 Fed Com - Phantom Bank 31 Fed Com No. 701H - Original Hole - Surveys Original Hole												Offset Site Error:	0.00 ft
Survey Program: 176-MWD, 1175-MWD, 9827-MWD, 15717-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)			
14,606.33	12,020.57	12,931.00	10,360.33	70.21	71.94	4.85	284.64	-2,913.12	1,667.88	1,592.96	74.92	22.263	
14,700.00	12,019.20	13,021.70	10,358.66	72.42	73.99	4.77	281.24	-3,003.73	1,668.05	1,592.17	75.88	21.983	
14,737.33	12,018.65	13,062.18	10,358.24	73.30	74.90	4.73	279.32	-3,044.16	1,667.77	1,591.47	76.30	21.858	
14,800.00	12,017.74	13,099.52	10,357.30	74.79	75.75	4.68	277.48	-3,081.45	1,668.25	1,591.56	76.68	21.756	
14,900.00	12,016.27	13,232.39	10,353.88	77.16	78.75	4.48	269.75	-3,214.04	1,669.08	1,591.03	78.04	21.386	
14,938.26	12,015.71	13,263.31	10,353.37	78.07	79.45	4.42	267.62	-3,244.88	1,668.99	1,590.64	78.35	21.301	
15,000.00	12,014.81	13,307.00	10,352.40	79.54	80.44	4.34	264.51	-3,288.45	1,669.23	1,590.44	78.79	21.187	
15,100.00	12,013.35	13,400.00	10,349.55	81.92	82.56	4.17	258.46	-3,381.21	1,670.46	1,590.75	79.71	20.957	
15,200.00	12,011.88	13,594.75	10,346.26	84.30	87.02	3.99	250.30	-3,575.71	1,671.77	1,590.09	81.68	20.467	
15,300.00	12,010.42	13,718.75	10,351.28	86.69	89.89	3.99	248.28	-3,699.59	1,666.10	1,583.02	83.08	20.055	
15,400.00	12,008.96	13,775.00	10,353.21	89.07	91.20	4.00	247.48	-3,755.80	1,661.49	1,577.66	83.83	19.820	
15,500.00	12,007.50	13,869.00	10,354.44	91.47	93.38	3.97	245.19	-3,849.76	1,658.65	1,573.73	84.92	19.532	
15,583.91	12,006.27	13,909.58	10,354.10	93.48	94.32	3.95	243.83	-3,890.32	1,657.78	1,572.32	85.46	19.398	
15,600.00	12,006.03	13,919.52	10,353.92	93.86	94.55	3.94	243.49	-3,900.24	1,657.81	1,572.23	85.58	19.371	
15,700.00	12,004.57	14,015.61	10,351.17	96.26	96.79	3.87	240.00	-3,996.24	1,659.03	1,572.33	86.70	19.136	
15,800.00	12,003.11	14,100.55	10,349.51	98.66	98.77	3.78	236.34	-4,081.07	1,659.44	1,571.74	87.70	18.922	
15,900.00	12,001.64	14,310.48	10,347.30	101.06	103.65	3.37	221.32	-4,290.35	1,659.79	1,569.83	89.96	18.451	
16,000.00	12,000.18	14,414.59	10,351.14	103.46	106.10	3.19	214.40	-4,394.15	1,654.34	1,563.22	91.12	18.155	
16,100.00	11,998.72	14,478.11	10,353.03	105.86	107.61	3.18	213.02	-4,457.63	1,649.95	1,557.94	92.01	17.932	
16,200.00	11,997.26	14,525.00	10,353.34	108.27	108.73	3.20	212.76	-4,504.51	1,648.18	1,555.46	92.72	17.776	
16,222.43	11,996.93	14,547.62	10,353.13	108.81	109.26	3.21	212.77	-4,527.12	1,648.08	1,555.06	93.02	17.718	
16,300.00	11,995.79	14,591.08	10,352.04	110.68	110.29	3.23	212.74	-4,570.57	1,648.95	1,555.31	93.64	17.610	
16,400.00	11,994.33	14,618.00	10,350.91	113.09	110.92	3.24	212.70	-4,597.47	1,652.89	1,558.89	94.00	17.584	
16,500.00	11,992.87	14,712.00	10,343.20	115.50	113.13	3.26	212.34	-4,691.13	1,659.68	1,564.39	95.29	17.417	
16,600.00	11,991.41	15,036.86	10,332.56	117.91	120.79	3.30	209.20	-5,015.20	1,665.27	1,566.03	99.23	16.781	
16,700.00	11,989.94	15,125.80	10,337.37	120.32	122.90	3.33	208.60	-5,104.01	1,658.52	1,558.07	100.45	16.511	
16,800.00	11,988.48	15,180.00	10,339.33	122.73	124.18	3.38	209.05	-5,158.17	1,653.77	1,552.38	101.39	16.312	
16,900.00	11,987.02	15,241.38	10,340.02	125.15	125.65	3.45	210.05	-5,219.54	1,651.53	1,549.14	102.39	16.130	
16,918.74	11,986.74	15,251.53	10,339.94	125.60	125.89	3.46	210.21	-5,229.69	1,651.42	1,548.87	102.55	16.103	
17,000.00	11,985.55	15,303.84	10,338.88	127.56	127.13	3.52	211.19	-5,281.97	1,651.99	1,548.63	103.36	15.983	
17,100.00	11,984.09	15,389.88	10,335.96	129.98	129.19	3.66	214.18	-5,367.91	1,654.18	1,549.56	104.63	15.811	
17,175.07	11,982.99	15,502.07	10,333.29	131.79	131.87	3.78	215.98	-5,480.04	1,655.00	1,548.91	106.09	15.600	

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

FLAT CREEK
RESOURCES

Anticollision Report

Company:	Flat Creek Resources, LLC	Local Co-ordinate Reference:	Well Phantom Bank 31 Fed Com No. 511H
Project:	Eddy County, New Mexico NAD27 NME	TVD Reference:	RKB=3129+25 @ 3154.00ft
Reference Site:	Phantom Bank 31 Fed Com	MD Reference:	RKB=3129+25 @ 3154.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Phantom Bank 31 Fed Com No. 511H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev2	Offset TVD Reference:	Offset Datum

Offset Design: Phantom Bank 31 Fed Com - Phantom Bank 31 Fed Com No. 702H - Original Hole - Surveys Original Hole													Offset Site Error: 0.00 ft
Survey Program: 176-MWD, 1171-MWD, 14756-MWD													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 (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
0.00	0.00	1.50	1.50	0.00	0.01	-67.59	40.72	-98.76	106.82				
100.00	100.00	101.75	101.75	0.43	0.60	-67.56	40.73	-98.62	106.70	105.67	1.03	103.567	
200.00	200.00	201.91	201.91	1.25	1.23	-67.48	40.74	-98.25	106.36	103.88	2.48	42.925	
300.00	300.00	301.80	301.79	1.75	1.92	-67.46	40.64	-97.92	106.02	102.35	3.67	28.893	
361.45	361.45	362.95	362.95	1.98	2.22	-67.43	40.65	-97.82	105.93	101.73	4.20	25.242	
400.00	400.00	401.32	401.32	2.13	2.40	-67.38	40.75	-97.82	105.96	101.44	4.53	23.400	
500.00	500.00	500.81	500.80	2.46	2.82	-67.12	41.35	-98.00	106.37	101.09	5.28	20.159	
600.00	600.00	599.86	599.85	2.75	3.07	-66.69	42.48	-98.59	107.36	101.56	5.80	18.500	
700.00	700.00	698.58	698.54	3.02	3.28	-66.31	44.00	-100.30	109.57	103.30	6.27	17.475	
800.00	800.00	798.49	798.40	3.27	3.51	-65.79	46.11	-102.53	112.47	105.74	6.73	16.722	
900.00	900.00	898.72	898.58	3.50	3.75	-64.97	48.66	-104.19	115.03	107.86	7.18	16.032	
1,000.00	1,000.00	998.11	997.91	3.72	3.99	-63.71	52.13	-105.53	117.76	110.17	7.59	15.506	
1,100.00	1,100.00	1,097.22	1,096.94	3.92	4.76	-62.88	55.19	-107.78	121.17	113.00	8.18	14.818	
1,200.00	1,200.00	1,197.03	1,196.67	4.12	5.53	-63.35	56.12	-111.82	125.20	116.48	8.72	14.359	
1,300.00	1,300.00	1,299.23	1,298.78	4.31	5.95	-64.53	55.14	-115.75	128.25	119.09	9.15	14.009	
1,400.00	1,400.00	1,400.75	1,400.26	4.50	6.08	-65.67	53.35	-118.00	129.50	120.01	9.49	13.643	
1,500.00	1,500.00	1,501.41	1,500.89	4.68	6.23	-66.67	51.64	-119.76	130.42	120.62	9.80	13.303	
1,600.00	1,600.00	1,602.98	1,602.45	4.85	6.39	-66.86	51.18	-119.76	130.24	120.12	10.11	12.876	
1,700.00	1,700.00	1,703.29	1,702.76	5.02	6.51	-66.74	51.02	-118.73	129.23	118.83	10.40	12.427	
1,800.00	1,800.00	1,803.26	1,802.73	5.19	6.62	-66.86	50.42	-117.98	128.31	117.64	10.67	12.026	
1,900.00	1,900.00	1,904.01	1,903.46	5.35	6.75	-67.12	49.42	-117.11	127.13	116.19	10.94	11.618	
2,000.00	2,000.00	2,004.97	2,004.40	5.50	6.88	-67.55	47.80	-115.68	125.20	113.98	11.22	11.163	
2,100.00	2,099.99	2,105.72	2,105.11	5.65	7.01	-113.47	45.76	-113.64	122.90	111.42	11.48	10.705	
2,174.71	2,174.69	2,178.39	2,177.75	5.77	7.12	-114.84	43.93	-112.56	121.94	110.24	11.70	10.424	
2,200.00	2,199.96	2,202.82	2,202.17	5.81	7.15	-115.45	43.31	-112.55	122.05	110.28	11.77	10.370	
2,300.00	2,299.86	2,301.10	2,300.42	5.98	7.31	-118.43	40.85	-113.50	124.18	112.12	12.06	10.300	
2,400.00	2,399.73	2,400.73	2,400.00	6.17	7.47	-121.82	38.25	-115.10	127.70	115.41	12.29	10.392	
2,500.00	2,499.59	2,500.20	2,499.44	6.37	7.63	-124.74	36.25	-116.66	131.70	119.16	12.54	10.505	
2,600.00	2,599.45	2,599.87	2,599.09	6.58	7.77	-127.14	35.11	-118.18	136.10	123.29	12.81	10.622	
2,700.00	2,699.31	2,699.73	2,698.93	6.80	7.93	-129.46	33.77	-119.69	140.70	127.58	13.11	10.728	
2,800.00	2,799.18	2,799.80	2,798.98	7.04	8.08	-131.56	32.62	-121.10	145.42	131.98	13.44	10.819	
2,900.00	2,899.04	2,900.48	2,899.65	7.28	8.24	-133.43	31.72	-121.97	149.79	136.00	13.78	10.867	
3,000.00	2,998.90	3,000.61	2,999.78	7.53	8.42	-135.31	30.50	-122.49	153.95	139.81	14.14	10.889	
3,100.00	3,098.77	3,100.63	3,099.77	7.78	8.61	-137.31	28.67	-122.78	158.07	143.57	14.50	10.898	
3,200.00	3,198.63	3,200.96	3,200.09	8.05	8.80	-139.17	26.94	-122.94	162.24	147.36	14.87	10.907	
3,300.00	3,298.53	3,299.60	3,298.73	8.31	9.10	-140.22	26.81	-122.96	165.60	150.01	15.60	10.617	
3,400.00	3,398.50	3,398.68	3,397.74	8.55	9.75	-139.70	29.91	-124.70	169.08	152.35	16.73	10.105	
3,500.00	3,498.49	3,500.84	3,499.85	8.72	10.12	-93.89	32.83	-125.69	170.50	153.19	17.31	9.852	
3,600.00	3,598.49	3,601.62	3,600.62	8.83	10.14	-93.49	34.05	-125.47	170.20	152.75	17.45	9.753	
3,700.00	3,698.49	3,701.31	3,700.32	8.93	10.16	-93.41	34.30	-125.18	169.90	152.29	17.60	9.653	
3,747.83	3,746.32	3,748.82	3,747.82	8.98	10.18	-93.42	34.28	-125.13	169.84	152.16	17.68	9.607	
3,800.00	3,798.49	3,800.51	3,799.51	9.04	10.20	-93.40	34.33	-125.20	169.92	152.15	17.76	9.565	
3,900.00	3,898.49	3,900.25	3,899.25	9.14	10.28	-93.34	34.48	-125.61	170.31	152.35	17.96	9.482	
4,000.00	3,998.49	4,000.22	3,999.22	9.24	10.38	-93.32	34.53	-126.06	170.76	152.59	18.17	9.396	
4,100.00	4,098.49	4,100.04	4,099.04	9.35	10.49	-93.35	34.41	-126.55	171.26	152.87	18.39	9.311	
4,200.00	4,198.49	4,200.39	4,199.39	9.45	10.63	-93.51	33.91	-126.96	171.70	153.08	18.62	9.222	
4,300.00	4,298.49	4,298.60	4,297.58	9.55	10.89	-93.11	35.05	-127.90	172.58	153.62	18.96	9.103	
4,400.00	4,398.49	4,397.46	4,396.33	9.65	11.14	-91.72	39.17	-129.84	174.37	155.06	19.30	9.033	
4,500.00	4,498.49	4,497.55	4,496.18	9.75	11.16	-89.59	45.67	-131.98	176.44	157.05	19.39	9.101	
4,600.00	4,598.49	4,596.80	4,595.12	9.86	11.18	-87.15	53.32	-134.23	178.93	159.48	19.45	9.201	
4,700.00	4,698.49	4,696.82	4,694.80	9.96	11.19	-84.71	61.16	-136.43	181.69	162.18	19.52	9.309	
4,800.00	4,798.49	4,796.31	4,794.00	10.06	11.22	-82.52	68.43	-138.64	184.72	165.11	19.61	9.420	

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

FLAT CREEK
RESOURCES

Anticollision Report

Company:	Flat Creek Resources, LLC	Local Co-ordinate Reference:	Well Phantom Bank 31 Fed Com No. 511H
Project:	Eddy County, New Mexico NAD27 NME	TVD Reference:	RKB=3129+25 @ 3154.00ft
Reference Site:	Phantom Bank 31 Fed Com	MD Reference:	RKB=3129+25 @ 3154.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Phantom Bank 31 Fed Com No. 511H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev2	Offset TVD Reference:	Offset Datum

Offset Design: Phantom Bank 31 Fed Com - Phantom Bank 31 Fed Com No. 702H - Original Hole - Surveys Original Hole													Offset Site Error: 0.00 ft
Survey Program: 176-MWD, 1171-MWD, 14756-MWD													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	
4,900.00	4,898.49	4,895.61	4,893.04	10.16	11.25	-80.58	75.19	-141.14	188.21	168.49	19.73	9.542	
5,000.00	4,998.49	4,995.33	4,992.51	10.26	11.29	-78.80	81.70	-143.83	192.04	172.18	19.86	9.669	
5,100.00	5,098.47	5,095.26	5,092.20	10.51	11.34	-11.43	88.11	-146.47	194.32	174.30	20.02	9.707	
5,200.00	5,198.33	5,194.79	5,191.48	10.82	11.39	-10.04	94.60	-149.13	193.35	173.00	20.35	9.502	
5,300.00	5,297.97	5,294.52	5,290.96	10.84	11.44	-8.81	101.08	-152.01	189.39	168.87	20.52	9.230	
5,400.00	5,397.52	5,395.27	5,391.48	10.89	11.50	-7.64	107.24	-154.81	184.40	163.76	20.64	8.933	
5,500.00	5,497.07	5,496.81	5,492.82	10.96	11.55	-6.34	113.42	-156.81	178.72	157.93	20.79	8.596	
5,600.00	5,596.63	5,597.21	5,593.02	11.04	11.60	-4.87	119.50	-157.94	172.33	151.37	20.95	8.224	
5,700.00	5,696.18	5,697.02	5,692.67	11.13	11.65	-3.47	125.05	-159.08	165.89	144.74	21.15	7.844	
5,800.00	5,795.74	5,796.93	5,792.44	11.24	11.70	-2.11	130.16	-160.31	159.48	138.10	21.37	7.462	
5,900.00	5,895.29	5,898.88	5,894.23	11.36	11.77	-0.35	135.69	-160.60	152.42	130.78	21.64	7.044	
6,000.00	5,994.84	5,998.33	5,993.46	11.49	11.82	2.24	142.39	-159.44	144.79	122.88	21.91	6.608	
6,100.00	6,094.40	6,098.99	6,093.84	11.63	11.85	5.42	149.52	-157.58	137.07	114.88	22.19	6.178	
6,200.00	6,193.95	6,198.20	6,192.81	11.78	11.89	8.83	156.19	-155.59	129.48	106.98	22.50	5.754	
6,300.00	6,293.50	6,297.80	6,292.20	11.94	11.94	12.40	162.43	-153.88	122.37	99.50	22.87	5.351	
6,400.00	6,393.06	6,397.07	6,391.31	12.11	12.00	15.97	167.93	-152.59	115.64	92.36	23.28	4.968	
6,500.00	6,492.61	6,494.84	6,488.88	12.30	12.09	19.95	174.06	-151.91	110.35	86.60	23.75	4.647	
6,600.00	6,592.17	6,592.65	6,586.38	12.49	12.23	24.60	181.95	-152.02	107.54	83.25	24.29	4.427	
6,700.00	6,691.72	6,692.07	6,685.41	12.69	12.43	29.52	190.55	-152.62	106.27	81.40	24.87	4.273	
6,800.00	6,791.27	6,792.05	6,785.05	12.90	12.65	34.30	198.80	-153.52	105.63	80.22	25.41	4.157	
6,900.00	6,890.83	6,892.38	6,885.10	13.12	12.88	38.73	206.27	-154.81	105.17	79.21	25.96	4.052	
7,000.00	6,990.38	6,992.65	6,985.14	13.35	13.12	42.99	212.96	-156.13	104.65	78.18	26.47	3.954	
7,100.00	7,089.93	7,092.87	7,085.15	13.58	13.36	47.26	219.23	-157.34	104.27	77.34	26.93	3.872	
7,200.00	7,189.49	7,192.83	7,184.93	13.83	13.60	51.43	224.96	-158.60	103.98	76.63	27.35	3.802	
7,203.21	7,192.68	7,196.02	7,188.12	13.83	13.61	51.56	225.14	-158.64	103.98	76.62	27.36	3.800 CC, ES	
7,300.00	7,289.10	7,293.02	7,284.97	14.05	13.85	55.32	230.52	-159.84	104.40	76.71	27.69	3.770 SF	
7,400.00	7,388.93	7,393.52	7,385.33	14.35	14.10	57.69	235.50	-161.07	106.39	78.33	28.06	3.791	
7,500.00	7,488.91	7,494.47	7,486.19	14.66	14.35	58.19	239.73	-162.63	109.62	81.15	28.47	3.851	
7,600.00	7,588.91	7,594.78	7,586.42	14.72	14.60	-8.12	243.19	-164.21	113.24	84.45	28.78	3.934	
7,700.00	7,688.91	7,695.38	7,686.96	14.80	14.84	-8.73	246.24	-165.92	116.49	87.38	29.11	4.002	
7,800.00	7,788.91	7,795.81	7,787.35	14.87	15.07	-9.30	248.80	-167.50	119.25	89.82	29.43	4.052	
7,900.00	7,888.91	7,896.36	7,887.86	14.95	15.30	-9.74	250.95	-168.81	121.58	91.84	29.74	4.088	
8,000.00	7,988.91	7,996.81	7,988.29	15.02	15.52	-10.19	252.64	-170.08	123.46	93.42	30.04	4.109	
8,100.00	8,088.91	8,096.98	8,088.45	15.09	15.73	-10.56	254.16	-171.18	125.14	94.81	30.33	4.126	
8,200.00	8,188.91	8,197.62	8,189.07	15.17	15.92	-10.41	255.48	-171.08	126.41	95.83	30.59	4.133	
8,300.00	8,288.91	8,298.16	8,289.61	15.24	16.07	-10.26	256.44	-170.92	127.33	96.52	30.81	4.133	
8,400.00	8,388.91	8,398.36	8,389.81	15.32	16.16	-9.85	256.90	-170.06	127.63	96.66	30.97	4.121	
8,500.00	8,488.91	8,496.63	8,488.05	15.39	16.27	-9.25	258.17	-168.92	128.72	97.55	31.17	4.130	
8,600.00	8,588.91	8,595.10	8,586.50	15.47	16.48	-9.34	260.61	-169.52	131.26	99.79	31.46	4.172	
8,700.00	8,688.91	8,695.09	8,686.43	15.54	16.72	-9.90	263.47	-171.33	134.37	102.57	31.80	4.226	
8,800.00	8,788.91	8,795.89	8,787.18	15.61	16.95	-10.69	265.77	-173.65	137.04	104.92	32.12	4.266	
8,900.00	8,888.91	8,896.89	8,888.12	15.69	17.15	-11.50	267.67	-176.02	139.33	106.92	32.41	4.299	
9,000.00	8,988.91	8,991.46	8,982.04	15.76	17.57	-15.35	268.26	-185.87	142.43	109.44	32.98	4.318	
9,100.00	9,088.91	9,079.10	9,066.17	15.84	19.11	-24.20	268.82	-210.12	152.87	118.61	34.26	4.462	
9,200.00	9,188.91	9,167.39	9,147.74	15.91	20.30	-34.63	269.64	-243.87	173.63	137.88	35.75	4.857	
9,300.00	9,288.91	9,246.83	9,219.41	15.99	20.72	-43.10	269.88	-278.06	202.83	166.04	36.79	5.513	
9,400.00	9,388.91	9,311.00	9,273.64	16.06	21.18	-49.86	269.47	-312.29	244.30	206.50	37.80	6.463	
9,500.00	9,488.91	9,379.00	9,325.75	16.14	21.97	-56.56	268.26	-355.87	298.36	259.11	39.25	7.601	
9,600.00	9,588.91	9,379.00	9,325.75	16.21	21.97	-56.56	268.26	-355.87	363.25	323.88	39.37	9.227	
9,700.00	9,688.91	9,429.91	9,358.73	16.29	22.96	-61.39	265.46	-394.44	434.35	391.87	42.49	10.224	
9,800.00	9,788.91	9,474.00	9,380.74	16.37	23.85	-65.49	260.64	-432.27	515.04	469.53	45.51	11.317	
9,900.00	9,888.91	9,474.00	9,380.74	16.44	23.85	-65.49	260.64	-432.27	597.66	551.95	45.71	13.076	

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



FLAT CREEK
RESOURCES

Anticollision Report

Company:	Flat Creek Resources, LLC	Local Co-ordinate Reference:	Well Phantom Bank 31 Fed Com No. 511H
Project:	Eddy County, New Mexico NAD27 NME	TVD Reference:	RKB=3129+25 @ 3154.00ft
Reference Site:	Phantom Bank 31 Fed Com	MD Reference:	RKB=3129+25 @ 3154.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Phantom Bank 31 Fed Com No. 511H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev2	Offset TVD Reference:	Offset Datum

Offset Design: Phantom Bank 31 Fed Com - Phantom Bank 31 Fed Com No. 702H - Original Hole - Surveys Original Hole													Offset Site Error:	0.00 ft
Survey Program: 176-MWD, 1171-MWD, 14756-MWD							Rule Assigned:						Offset Well Error:	0.00 ft
Reference	Offset	Semi Major Axis		Distance		Offset Wellbore Centre		Between		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)	Centres (ft)	Ellipses (ft)	Separation (ft)			
10,000.00	9,988.91	9,474.00	9,380.74	16.52	23.85	-65.49	260.64	-432.27	684.93	639.11	45.82	14.947		
10,100.00	10,088.91	9,474.00	9,380.74	16.59	23.85	-65.49	260.64	-432.27	775.28	729.36	45.93	16.881		
10,200.00	10,188.91	9,509.20	9,394.28	16.67	24.18	-68.51	255.61	-464.36	865.59	817.20	48.39	17.887		
10,300.00	10,288.91	9,519.75	9,397.77	16.74	24.28	-69.35	253.97	-474.17	958.18	908.92	49.26	19.451		
10,400.00	10,388.91	9,528.88	9,400.59	16.82	24.37	-70.06	252.51	-482.74	1,051.83	1,001.77	50.06	21.013		
10,500.00	10,488.91	9,569.00	9,410.63	16.89	24.74	-72.93	245.62	-520.95	1,148.01	1,095.05	52.96	21.678		
10,600.00	10,588.91	9,569.00	9,410.63	16.97	24.74	-72.93	245.62	-520.95	1,242.53	1,189.35	53.18	23.366		
10,700.00	10,688.91	9,569.00	9,410.63	17.05	24.74	-72.93	245.62	-520.95	1,337.85	1,284.45	53.40	25.054		
10,800.00	10,788.91	9,569.00	9,410.63	17.12	24.74	-72.93	245.62	-520.95	1,433.80	1,380.17	53.63	26.736		
10,900.00	10,888.91	9,569.00	9,410.63	17.20	24.74	-72.93	245.62	-520.95	1,530.28	1,476.41	53.87	28.409		
11,000.00	10,988.91	9,569.00	9,410.63	17.27	24.74	-72.93	245.62	-520.95	1,627.17	1,573.06	54.11	30.070		
11,100.00	11,088.91	9,569.00	9,410.63	17.35	24.74	-72.93	245.62	-520.95	1,724.43	1,670.06	54.37	31.718		
11,200.00	11,188.91	9,569.00	9,410.63	17.43	24.74	-72.93	245.62	-520.95	1,821.98	1,767.35	54.63	33.351		

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



FLAT CREEK
RESOURCES

Anticollision Report

Company:	Flat Creek Resources, LLC	Local Co-ordinate Reference:	Well Phantom Bank 31 Fed Com No. 511H
Project:	Eddy County, New Mexico NAD27 NME	TVD Reference:	RKB=3129+25 @ 3154.00ft
Reference Site:	Phantom Bank 31 Fed Com	MD Reference:	RKB=3129+25 @ 3154.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Phantom Bank 31 Fed Com No. 511H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev2	Offset TVD Reference:	Offset Datum

Offset Design:		Phantom Bank 31 Fed Com - Phantom Bank 31 Fed Com No. 703H - Original Hole - Surveys Original Hole											Offset Site Error:		0.00 ft	
Survey Program:		199-MWD, 14905-MWD								Rule Assigned:				Offset Well Error:		0.00 ft
Reference		Offset		Semi Major Axis		Offset Wellbore Centre			Distance							
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			
0.00	0.00	1.51	1.51	0.00	0.01	-83.91	10.53	-98.61	99.17							
100.00	100.00	101.98	101.98	0.43	0.66	-84.06	10.24	-98.39	98.92	97.84	1.09	91.149				
200.00	200.00	202.42	202.41	1.25	1.31	-84.51	9.40	-97.75	98.20	95.65	2.55	38.466				
300.00	300.00	302.23	302.21	1.75	1.88	-85.02	8.44	-97.01	97.38	93.78	3.60	27.056				
400.00	400.00	402.13	402.11	2.13	2.25	-85.35	7.83	-96.38	96.70	92.36	4.34	22.294				
500.00	500.00	502.15	502.13	2.46	2.58	-85.53	7.49	-95.80	96.10	91.11	4.98	19.289				
600.00	600.00	602.38	602.36	2.75	2.88	-85.68	7.18	-95.01	95.28	89.71	5.57	17.095				
700.00	700.00	702.02	701.99	3.02	3.14	-85.66	7.15	-94.19	94.46	88.35	6.11	15.469				
800.00	800.00	801.58	801.55	3.27	3.33	-85.38	7.60	-93.96	94.27	87.70	6.57	14.349				
900.00	900.00	901.77	901.74	3.50	3.51	-84.87	8.43	-93.80	94.17	87.18	7.00	13.459				
1,000.00	1,000.00	1,001.97	1,001.94	3.72	3.68	-84.56	8.90	-93.40	93.82	86.43	7.39	12.693				
1,100.00	1,100.00	1,102.42	1,102.39	3.92	3.91	-84.43	9.03	-92.56	93.00	85.16	7.84	11.867				
1,200.00	1,200.00	1,202.16	1,202.11	4.12	4.17	-84.33	9.11	-91.82	92.27	83.98	8.29	11.132				
1,300.00	1,300.00	1,302.39	1,302.35	4.31	4.41	-84.46	8.83	-91.03	91.46	82.73	8.73	10.479				
1,400.00	1,400.00	1,402.45	1,402.40	4.50	4.66	-84.63	8.47	-90.06	90.46	81.30	9.16	9.872				
1,500.00	1,500.00	1,502.50	1,502.44	4.68	4.92	-84.70	8.27	-89.10	89.49	79.89	9.60	9.326				
1,600.00	1,600.00	1,602.68	1,602.61	4.85	5.17	-84.84	7.95	-87.94	88.31	78.29	10.02	8.810				
1,700.00	1,700.00	1,702.85	1,702.78	5.02	5.43	-85.16	7.34	-86.64	86.96	76.52	10.44	8.326				
1,800.00	1,800.00	1,803.20	1,803.11	5.19	5.69	-85.85	6.17	-85.07	85.31	74.45	10.86	7.857				
1,900.00	1,900.00	1,903.40	1,903.28	5.35	5.94	-86.97	4.41	-83.12	83.25	71.99	11.26	7.394				
2,000.00	2,000.00	2,003.64	2,003.47	5.50	6.21	-88.42	2.23	-80.94	81.00	69.35	11.65	6.953				
2,100.00	2,099.99	2,103.09	2,102.87	5.65	6.47	-135.40	0.07	-78.79	79.42	67.41	12.01	6.612				
2,122.07	2,122.06	2,125.00	2,124.78	5.69	6.53	-135.86	-0.27	-78.43	79.37	67.28	12.09	6.564 CC, ES				
2,200.00	2,199.96	2,202.53	2,202.29	5.81	6.73	-137.63	-1.21	-77.41	79.96	67.61	12.36	6.472 SF				
2,300.00	2,299.86	2,302.57	2,302.32	5.98	6.98	-140.27	-2.02	-76.30	82.21	69.51	12.69	6.477				
2,400.00	2,399.73	2,401.92	2,401.67	6.17	7.21	-143.09	-2.81	-75.33	85.44	72.44	13.01	6.569				
2,500.00	2,499.59	2,501.90	2,501.64	6.37	7.44	-145.74	-3.70	-74.61	89.14	75.83	13.31	6.698				
2,600.00	2,599.45	2,601.51	2,601.24	6.58	7.67	-147.97	-4.29	-74.06	93.10	79.48	13.62	6.836				
2,700.00	2,699.31	2,701.85	2,701.58	6.80	7.89	-149.86	-4.56	-73.35	96.97	83.00	13.96	6.944				
2,800.00	2,799.18	2,801.55	2,801.28	7.04	8.10	-151.45	-4.57	-72.73	100.93	86.59	14.34	7.036				
2,900.00	2,899.04	2,902.09	2,901.82	7.28	8.29	-152.74	-4.14	-71.84	104.58	89.84	14.75	7.091				
3,000.00	2,998.90	3,002.15	3,001.87	7.53	8.47	-153.78	-3.33	-70.76	107.99	92.81	15.17	7.117				
3,100.00	3,098.77	3,102.31	3,102.02	7.78	8.66	-154.80	-2.53	-69.49	111.24	95.62	15.61	7.124				
3,200.00	3,198.63	3,201.95	3,201.64	8.05	8.88	-156.02	-2.20	-67.93	114.42	98.37	16.05	7.127				
3,300.00	3,298.53	3,300.53	3,300.21	8.31	9.08	-157.53	-3.15	-66.70	117.62	101.20	16.42	7.162				
3,400.00	3,398.50	3,400.31	3,399.98	8.55	9.26	-158.60	-4.37	-66.45	120.30	103.57	16.73	7.191				
3,500.00	3,498.49	3,501.45	3,501.08	8.72	9.50	-115.02	-6.61	-64.91	120.64	103.65	17.00	7.098				
3,600.00	3,598.49	3,600.59	3,600.13	8.83	9.79	-116.94	-9.90	-62.44	119.87	102.69	17.17	6.980				
3,607.59	3,606.09	3,608.05	3,607.59	8.84	9.82	-117.06	-10.12	-62.33	119.86	102.68	17.19	6.975				
3,700.00	3,698.49	3,699.42	3,698.93	8.93	10.01	-118.17	-12.39	-61.67	120.34	103.04	17.30	6.955				
3,800.00	3,798.49	3,798.95	3,798.44	9.04	10.15	-118.95	-14.38	-61.87	121.46	104.06	17.40	6.980				
3,900.00	3,898.49	3,898.81	3,898.28	9.14	10.26	-119.60	-16.25	-62.37	122.82	105.33	17.49	7.022				
4,000.00	3,998.49	3,997.80	3,997.24	9.24	10.38	-120.42	-18.63	-62.97	124.55	106.97	17.58	7.085				
4,100.00	4,098.49	4,095.62	4,094.93	9.35	10.57	-122.22	-23.55	-63.44	127.57	109.89	17.69	7.213				
4,200.00	4,198.49	4,192.53	4,191.46	9.45	10.86	-125.29	-32.10	-63.71	132.73	114.89	17.83	7.443				
4,300.00	4,298.49	4,288.95	4,287.14	9.55	11.19	-129.18	-43.97	-64.05	140.50	122.49	18.01	7.803				
4,400.00	4,398.49	4,387.79	4,385.00	9.65	11.48	-133.21	-57.86	-64.48	150.14	131.94	18.20	8.249				
4,500.00	4,498.49	4,487.74	4,483.98	9.75	11.77	-136.78	-71.70	-64.71	160.14	141.71	18.43	8.690				
4,600.00	4,598.49	4,587.21	4,582.53	9.86	12.05	-139.89	-85.16	-64.72	170.30	151.60	18.70	9.105				
4,700.00	4,698.49	4,687.20	4,681.68	9.96	12.35	-142.57	-98.07	-64.66	180.37	161.34	19.03	9.480				
4,800.00	4,798.49	4,783.61	4,777.28	10.06	12.64	-144.61	-110.51	-65.65	191.39	172.04	19.35	9.889				
4,900.00	4,898.49	4,879.24	4,871.92	10.16	12.94	-146.51	-124.21	-67.15	204.13	184.39	19.74	10.343				

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



FLAT CREEK
RESOURCES

Anticollision Report

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Reference Site:	Phantom Bank 31 Fed Com	MD Reference:	RKB=3129+25 @ 3154.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Phantom Bank 31 Fed Com No. 511H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev2	Offset TVD Reference:	Offset Datum

Offset Design: Phantom Bank 31 Fed Com - Phantom Bank 31 Fed Com No. 703H - Original Hole - Surveys Original Hole											Offset Site Error:	0.00 ft
Survey Program: 199-MWD, 14905-MWD											Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Offset Wellbore Centre		Distance		Rule Assigned:	
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
5,000.00	4,998.49	4,973.27	4,964.55	10.26	13.28	-148.60	-140.24	-68.28	219.21	199.00	20.21	10.848
5,100.00	5,098.47	5,070.81	5,060.39	10.51	13.64	-85.08	-158.40	-69.14	235.64	214.73	20.91	11.270
5,200.00	5,198.33	5,170.28	5,158.20	10.82	13.98	-87.82	-176.50	-69.81	251.88	230.16	21.73	11.593
5,300.00	5,297.97	5,266.23	5,252.48	10.84	14.32	-91.01	-194.28	-69.92	268.88	246.59	22.29	12.063
5,400.00	5,397.52	5,362.66	5,347.16	10.89	14.67	-94.27	-212.58	-69.98	287.22	264.30	22.91	12.535
5,500.00	5,497.07	5,460.36	5,443.11	10.96	15.02	-97.11	-230.97	-70.40	306.33	282.77	23.56	13.000
5,600.00	5,596.63	5,558.31	5,539.37	11.04	15.38	-99.59	-249.11	-70.94	325.82	301.61	24.21	13.456
5,700.00	5,696.18	5,654.44	5,633.85	11.13	15.74	-101.74	-266.80	-71.50	345.74	320.89	24.85	13.915
5,800.00	5,795.74	5,747.33	5,724.98	11.24	16.09	-103.67	-284.77	-71.72	366.94	341.48	25.46	14.414
5,900.00	5,895.29	5,841.53	5,817.20	11.36	16.46	-105.47	-304.02	-71.76	389.58	363.49	26.09	14.934
6,000.00	5,994.84	5,941.08	5,914.65	11.49	16.85	-107.22	-324.32	-71.43	412.48	385.72	26.77	15.409
6,100.00	6,094.40	6,042.38	6,014.04	11.63	17.25	-108.80	-343.94	-71.02	434.68	407.22	27.46	15.831
6,200.00	6,193.95	6,143.78	6,113.68	11.78	17.65	-110.30	-362.73	-70.01	456.30	428.16	28.14	16.214
6,300.00	6,293.50	6,238.95	6,207.31	11.94	18.04	-111.62	-379.71	-68.68	477.49	448.70	28.78	16.589
6,400.00	6,393.06	6,334.94	6,301.57	12.11	18.44	-112.77	-397.82	-67.96	499.90	470.47	29.43	16.985
6,500.00	6,492.61	6,430.85	6,395.84	12.30	18.83	-113.83	-415.49	-67.19	522.07	492.00	30.08	17.359
6,600.00	6,592.17	6,527.56	6,490.76	12.49	19.22	-114.67	-433.98	-67.74	545.05	514.34	30.71	17.749
6,700.00	6,691.72	6,628.31	6,589.76	12.69	19.62	-115.42	-452.67	-68.80	567.56	536.19	31.37	18.094
6,800.00	6,791.27	6,719.18	6,679.05	12.90	19.99	-116.04	-469.51	-69.77	590.14	558.18	31.96	18.463
6,900.00	6,890.83	6,806.17	6,764.24	13.12	20.36	-116.63	-487.07	-70.31	614.42	581.88	32.54	18.879
7,000.00	6,990.38	6,901.11	6,857.00	13.35	20.76	-117.24	-507.32	-70.67	639.92	606.73	33.19	19.281
7,100.00	7,089.93	7,003.47	6,957.14	13.58	21.19	-117.88	-528.49	-70.79	664.88	630.99	33.89	19.619
7,200.00	7,189.49	7,092.57	7,044.35	13.83	21.58	-118.40	-546.71	-70.80	689.70	655.20	34.50	19.991
7,300.00	7,289.10	7,174.74	7,124.44	14.05	21.96	-119.05	-565.14	-71.27	716.15	681.11	35.04	20.437
7,400.00	7,388.93	7,260.54	7,207.67	14.35	22.36	-119.65	-585.94	-72.00	742.88	707.25	35.63	20.851
7,500.00	7,488.91	7,359.76	7,303.72	14.66	22.81	-119.96	-610.75	-73.32	768.68	732.40	36.28	21.189
7,600.00	7,588.91	7,456.98	7,398.13	14.72	23.26	174.48	-633.96	-74.34	792.35	755.54	36.81	21.527
7,700.00	7,688.91	7,540.96	7,479.31	14.80	23.67	174.68	-655.45	-74.94	817.72	780.46	37.26	21.945
7,800.00	7,788.91	7,651.12	7,585.87	14.87	24.18	174.89	-683.37	-75.34	842.96	805.04	37.92	22.230
7,900.00	7,888.91	7,771.42	7,702.93	14.95	24.74	175.08	-711.10	-75.73	865.91	827.27	38.64	22.411
8,000.00	7,988.91	7,908.96	7,837.78	15.02	25.40	175.21	-738.11	-75.46	885.55	846.08	39.47	22.437
8,100.00	8,088.91	7,995.40	7,922.74	15.09	25.77	175.34	-754.01	-76.04	903.79	863.87	39.92	22.639
8,200.00	8,188.91	8,084.10	8,009.76	15.17	26.15	175.52	-771.13	-77.55	922.90	882.53	40.37	22.862
8,300.00	8,288.91	8,199.00	8,122.63	15.24	26.64	175.78	-792.47	-80.02	941.22	900.25	40.96	22.976
8,400.00	8,388.91	8,296.03	8,217.96	15.32	27.05	176.00	-810.41	-82.37	959.49	918.03	41.46	23.142
8,500.00	8,488.91	8,400.77	8,321.10	15.39	27.50	176.25	-828.37	-85.36	976.37	934.36	42.00	23.245
8,600.00	8,588.91	8,484.24	8,403.10	15.47	27.90	176.37	-843.93	-86.31	994.84	952.35	42.49	23.413
8,700.00	8,688.91	8,605.34	8,522.26	15.54	28.56	176.49	-865.47	-87.04	1,012.56	969.29	43.27	23.402
8,800.00	8,788.91	8,603.90	8,519.42	15.61	29.58	176.66	-888.12	-88.68	1,023.48	979.12	44.36	23.073
8,900.00	8,888.91	8,940.41	8,855.74	15.69	30.04	176.75	-894.90	-90.03	1,028.28	983.43	44.85	22.930
9,000.00	8,988.91	9,059.61	8,974.66	15.76	30.98	177.05	-898.42	-95.20	1,031.06	985.22	45.84	22.495
9,100.00	9,088.91	9,186.17	9,095.71	15.84	33.00	179.04	-899.26	-131.01	1,030.56	982.83	47.74	21.588
9,138.50	9,127.41	9,222.12	9,128.92	15.87	33.17	179.80	-899.04	-144.72	1,030.20	982.31	47.88	21.514
9,200.00	9,188.91	9,256.46	9,160.26	15.91	33.23	-179.42	-899.45	-158.74	1,031.09	983.09	48.01	21.479
9,300.00	9,288.91	9,314.72	9,212.73	15.99	33.33	-178.02	-901.68	-183.96	1,036.37	988.20	48.17	21.517
9,400.00	9,388.91	9,381.00	9,269.65	16.06	33.45	-176.17	-905.76	-217.60	1,046.22	997.95	48.27	21.673
9,500.00	9,488.91	9,439.62	9,313.86	16.14	33.69	-174.10	-908.97	-255.72	1,060.46	1,011.92	48.54	21.846
9,600.00	9,588.91	9,475.00	9,335.37	16.21	33.84	-172.58	-909.86	-283.74	1,080.32	1,031.46	48.86	22.109
9,700.00	9,688.91	9,515.62	9,355.54	16.29	34.11	-170.69	-910.06	-318.98	1,106.98	1,057.55	49.43	22.395
9,800.00	9,788.91	9,539.10	9,365.29	16.37	34.28	-169.55	-909.86	-340.33	1,140.76	1,090.71	50.05	22.793
9,900.00	9,888.91	9,569.00	9,375.60	16.44	34.49	-168.05	-909.28	-368.38	1,181.52	1,130.55	50.97	23.179
10,000.00	9,988.91	9,569.00	9,375.60	16.52	34.49	-168.05	-909.28	-368.38	1,228.39	1,176.97	51.43	23.886

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FLAT CREEK
RESOURCES

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Reference Design:	rev2	Offset TVD Reference:	Offset Datum

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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		
10,100.00	10,088.91	9,589.95	9,381.86	16.59	34.61	-167.00	-908.80	-388.36	1,281.09	1,229.07	52.02	24.629		
10,200.00	10,188.91	9,607.19	9,386.84	16.67	34.70	-166.13	-908.48	-404.86	1,338.80	1,286.21	52.59	25.458		
10,300.00	10,288.91	9,623.40	9,391.39	16.74	34.79	-165.33	-908.24	-420.42	1,400.94	1,347.78	53.16	26.353		
10,400.00	10,388.91	9,638.67	9,395.54	16.82	34.88	-164.57	-908.07	-435.12	1,466.98	1,413.25	53.73	27.305		
10,500.00	10,488.91	9,662.00	9,401.65	16.89	35.01	-163.42	-907.91	-457.63	1,536.48	1,482.08	54.40	28.246		
10,600.00	10,588.91	9,662.00	9,401.65	16.97	35.01	-163.42	-907.91	-457.63	1,608.88	1,554.11	54.77	29.375		
10,700.00	10,688.91	9,662.00	9,401.65	17.05	35.01	-163.42	-907.91	-457.63	1,684.12	1,628.99	55.13	30.551		
10,800.00	10,788.91	9,689.20	9,408.38	17.12	35.19	-162.09	-907.91	-483.99	1,761.35	1,705.71	55.65	31.652		
10,900.00	10,888.91	9,699.68	9,410.84	17.20	35.26	-161.59	-907.96	-494.18	1,840.80	1,784.75	56.05	32.842		

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

FLAT CREEK
RESOURCES

Anticollision Report

Company:	Flat Creek Resources, LLC	Local Co-ordinate Reference:	Well Phantom Bank 31 Fed Com No. 511H
Project:	Eddy County, New Mexico NAD27 NME	TVD Reference:	RKB=3129+25 @ 3154.00ft
Reference Site:	Phantom Bank 31 Fed Com	MD Reference:	RKB=3129+25 @ 3154.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Phantom Bank 31 Fed Com No. 511H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev2	Offset TVD Reference:	Offset Datum

Offset Design: Phantom Bank 31 Fed Com - Phantom Bank 31 Fed Com No. 707H - Original Hole - rev0													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)			
0.00	0.00	0.00	0.00	0.00	0.00	-177.08	-852.80	-43.47	853.95				
100.00	100.00	92.00	92.00	0.43	0.39	-177.08	-852.80	-43.47	853.91	853.09	0.82	1,037.550	
200.00	200.00	192.00	192.00	1.25	1.19	-177.08	-852.80	-43.47	853.91	851.47	2.44	350.095	
300.00	300.00	292.00	292.00	1.75	1.71	-177.08	-852.80	-43.47	853.91	850.45	3.45	247.202	
400.00	400.00	392.00	392.00	2.13	2.10	-177.08	-852.80	-43.47	853.91	849.67	4.23	201.660	
500.00	500.00	492.00	492.00	2.46	2.43	-177.08	-852.80	-43.47	853.91	849.01	4.90	174.402	
600.00	600.00	592.00	592.00	2.75	2.73	-177.08	-852.80	-43.47	853.91	848.43	5.48	155.731	
700.00	700.00	692.00	692.00	3.02	3.00	-177.08	-852.80	-43.47	853.91	847.89	6.02	141.903	
800.00	800.00	792.00	792.00	3.27	3.25	-177.08	-852.80	-43.47	853.91	847.40	6.51	131.125	
900.00	900.00	892.00	892.00	3.50	3.48	-177.08	-852.80	-43.47	853.91	846.93	6.98	122.413	
1,000.00	1,000.00	992.00	992.00	3.72	3.70	-177.08	-852.80	-43.47	853.91	846.50	7.41	115.180	
1,100.00	1,100.00	1,092.00	1,092.00	3.92	3.91	-177.08	-852.80	-43.47	853.91	846.08	7.83	109.047	
1,200.00	1,200.00	1,192.00	1,192.00	4.12	4.11	-177.08	-852.80	-43.47	853.91	845.68	8.23	103.759	
1,300.00	1,300.00	1,292.00	1,292.00	4.31	4.30	-177.08	-852.80	-43.47	853.91	845.30	8.61	99.137	
1,400.00	1,400.00	1,392.00	1,392.00	4.50	4.48	-177.08	-852.80	-43.47	853.91	844.93	8.98	95.050	
1,500.00	1,500.00	1,492.00	1,492.00	4.68	4.66	-177.08	-852.80	-43.47	853.91	844.57	9.34	91.403	
1,600.00	1,600.00	1,592.00	1,592.00	4.85	4.84	-177.08	-852.80	-43.47	853.91	844.22	9.69	88.121	
1,700.00	1,700.00	1,692.00	1,692.00	5.02	5.01	-177.08	-852.80	-43.47	853.91	843.88	10.03	85.147	
1,800.00	1,800.00	1,792.00	1,792.00	5.19	5.17	-177.08	-852.80	-43.47	853.91	843.55	10.36	82.434	
1,900.00	1,900.00	1,892.00	1,892.00	5.35	5.33	-177.08	-852.80	-43.47	853.91	843.23	10.68	79.946	
2,000.00	2,000.00	1,992.00	1,992.00	5.50	5.49	-177.08	-852.80	-43.47	853.91	842.91	11.00	77.654 CC, ES	
2,100.00	2,099.99	2,091.99	2,091.99	5.65	5.65	137.95	-852.80	-43.47	854.56	843.26	11.30	75.637	
2,200.00	2,199.96	2,191.96	2,191.96	5.81	5.80	138.06	-852.80	-43.47	856.50	844.90	11.60	73.822	
2,300.00	2,299.86	2,291.86	2,291.86	5.98	5.95	138.23	-852.80	-43.47	859.75	847.84	11.91	72.180	
2,400.00	2,399.73	2,391.73	2,391.73	6.17	6.09	138.46	-852.80	-43.47	863.67	851.44	12.23	70.641	
2,500.00	2,499.59	2,491.59	2,491.59	6.37	6.24	138.69	-852.80	-43.47	867.59	855.05	12.55	69.155	
2,600.00	2,599.45	2,591.45	2,591.45	6.58	6.38	138.92	-852.80	-43.47	871.53	858.66	12.87	67.718	
2,700.00	2,699.31	2,691.31	2,691.31	6.80	6.52	139.14	-852.80	-43.47	875.49	862.29	13.20	66.330	
2,800.00	2,799.18	2,791.18	2,791.18	7.04	6.66	139.36	-852.80	-43.47	879.45	865.92	13.53	64.990	
2,900.00	2,899.04	2,891.04	2,891.04	7.28	6.79	139.59	-852.80	-43.47	883.43	869.56	13.87	63.696	
3,000.00	2,998.90	2,990.90	2,990.90	7.53	6.92	139.80	-852.80	-43.47	887.43	873.22	14.21	62.449	
3,100.00	3,098.77	3,090.77	3,090.77	7.78	7.06	140.02	-852.80	-43.47	891.43	876.88	14.56	61.245	
3,200.00	3,198.63	3,190.63	3,190.63	8.05	7.19	140.24	-852.80	-43.47	895.45	880.55	14.90	60.084	
3,300.00	3,298.53	3,290.53	3,290.53	8.31	7.32	140.44	-852.80	-43.47	898.81	883.56	15.25	58.945	
3,400.00	3,398.50	3,390.50	3,390.50	8.55	7.45	140.55	-852.80	-43.47	900.83	885.25	15.58	57.820	
3,500.00	3,498.49	3,490.49	3,490.49	8.72	7.57	-174.41	-852.80	-43.47	901.51	885.65	15.86	56.841	
3,600.00	3,598.49	3,590.49	3,590.49	8.83	7.70	-174.41	-852.80	-43.47	901.51	885.41	16.10	56.006	
3,700.00	3,698.49	3,690.49	3,690.49	8.93	7.82	-174.41	-852.80	-43.47	901.51	885.18	16.33	55.202	
3,800.00	3,798.49	3,790.49	3,790.49	9.04	7.95	-174.41	-852.80	-43.47	901.51	884.94	16.56	54.426	
3,900.00	3,898.49	3,890.49	3,890.49	9.14	8.07	-174.41	-852.80	-43.47	901.51	884.71	16.79	53.677	
4,000.00	3,998.49	3,990.49	3,990.49	9.24	8.19	-174.41	-852.80	-43.47	901.51	884.48	17.02	52.954	
4,100.00	4,098.49	4,092.49	4,092.48	9.35	8.37	-174.31	-852.55	-44.94	901.41	884.17	17.24	52.287	
4,200.00	4,198.49	4,194.47	4,194.32	9.45	8.76	-173.99	-851.70	-49.98	901.08	883.63	17.45	51.631	
4,300.00	4,298.49	4,294.85	4,294.39	9.55	8.87	-173.49	-850.40	-57.69	900.62	883.00	17.62	51.103	
4,400.00	4,398.49	4,394.53	4,393.75	9.65	8.99	-172.98	-849.07	-65.57	900.23	882.39	17.83	50.485	
4,500.00	4,498.49	4,494.20	4,493.11	9.75	9.14	-172.47	-847.73	-73.44	899.90	881.85	18.05	49.863	
4,600.00	4,598.49	4,593.88	4,592.47	9.86	9.29	-171.97	-846.40	-81.31	899.64	881.38	18.26	49.257	
4,700.00	4,698.49	4,693.56	4,691.82	9.96	9.46	-171.46	-845.07	-89.19	899.46	880.98	18.48	48.667	
4,800.00	4,798.49	4,793.24	4,791.18	10.06	9.64	-170.95	-843.74	-97.06	899.35	880.65	18.70	48.092	
4,900.00	4,898.49	4,892.92	4,890.54	10.16	9.84	-170.44	-842.41	-104.94	899.31	880.39	18.92	47.533	
4,907.49	4,905.98	4,900.38	4,897.98	10.16	9.85	-170.40	-842.31	-105.53	899.31	880.37	18.94	47.492	
5,000.00	4,998.49	4,992.60	4,989.90	10.26	10.04	-169.93	-841.08	-112.81	899.34	880.20	19.14	46.985	

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

FLAT CREEK
RESOURCES

Anticollision Report

Company:	Flat Creek Resources, LLC	Local Co-ordinate Reference:	Well Phantom Bank 31 Fed Com No. 511H
Project:	Eddy County, New Mexico NAD27 NME	TVD Reference:	RKB=3129+25 @ 3154.00ft
Reference Site:	Phantom Bank 31 Fed Com	MD Reference:	RKB=3129+25 @ 3154.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Phantom Bank 31 Fed Com No. 511H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev2	Offset TVD Reference:	Offset Datum

Offset Design: Phantom Bank 31 Fed Com - Phantom Bank 31 Fed Com No. 707H - Original Hole - rev0												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												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	
5,100.00	5,098.47	5,092.39	5,089.37	10.51	10.25	-103.76	-839.74	-120.69	899.84	880.30	19.54	46.051	
5,200.00	5,198.33	5,192.33	5,188.99	10.82	10.48	-103.54	-838.41	-128.59	901.20	881.16	20.04	44.979	
5,300.00	5,297.97	5,292.30	5,288.64	10.84	10.71	-103.53	-837.07	-136.48	903.35	883.13	20.22	44.666	
5,400.00	5,397.52	5,392.27	5,388.28	10.89	10.95	-103.60	-835.74	-144.38	905.72	885.28	20.43	44.328	
5,500.00	5,497.07	5,492.23	5,487.93	10.96	11.20	-103.68	-834.40	-152.28	908.08	887.43	20.65	43.966	
5,600.00	5,596.63	5,592.20	5,587.57	11.04	11.45	-103.75	-833.07	-160.17	910.45	889.57	20.88	43.605	
5,700.00	5,696.18	5,692.16	5,687.22	11.13	11.72	-103.82	-831.73	-168.07	912.82	891.71	21.11	43.245	
5,800.00	5,795.74	5,792.13	5,786.86	11.24	11.99	-103.89	-830.40	-175.97	915.19	893.85	21.34	42.885	
5,900.00	5,895.29	5,892.09	5,886.50	11.36	12.26	-103.97	-829.06	-183.86	917.56	895.99	21.58	42.526	
6,000.00	5,994.84	5,992.06	5,986.15	11.49	12.54	-104.04	-827.73	-191.76	919.94	898.12	21.82	42.169	
6,100.00	6,094.40	6,092.02	6,085.79	11.63	12.83	-104.11	-826.39	-199.66	922.31	900.25	22.06	41.813	
6,200.00	6,193.95	6,191.99	6,185.44	11.78	13.12	-104.18	-825.06	-207.55	924.69	902.39	22.30	41.459	
6,300.00	6,293.50	6,291.95	6,285.08	11.94	13.41	-104.25	-823.72	-215.45	927.07	904.51	22.55	41.107	
6,400.00	6,393.06	6,391.92	6,384.72	12.11	13.71	-104.32	-822.39	-223.35	929.45	906.64	22.80	40.758	
6,500.00	6,492.61	6,491.88	6,484.37	12.30	14.01	-104.39	-821.05	-231.24	931.83	908.77	23.06	40.411	
6,600.00	6,592.17	6,591.85	6,584.01	12.49	14.32	-104.46	-819.72	-239.14	934.21	910.89	23.32	40.067	
6,700.00	6,691.72	6,691.81	6,683.65	12.69	14.63	-104.53	-818.38	-247.04	936.59	913.02	23.58	39.726	
6,800.00	6,791.27	6,791.78	6,783.30	12.90	14.94	-104.60	-817.05	-254.93	938.98	915.14	23.84	39.388	
6,900.00	6,890.83	6,891.75	6,882.94	13.12	15.26	-104.67	-815.71	-262.83	941.36	917.26	24.10	39.054	
7,000.00	6,990.38	6,991.71	6,982.59	13.35	15.58	-104.74	-814.37	-270.73	943.75	919.38	24.37	38.722	
7,100.00	7,089.93	7,091.68	7,082.23	13.58	15.90	-104.80	-813.04	-278.62	946.14	921.50	24.64	38.394	
7,200.00	7,189.49	7,191.64	7,181.87	13.83	16.22	-104.87	-811.70	-286.52	948.53	923.61	24.92	38.069	
7,300.00	7,289.10	7,291.61	7,281.52	14.05	16.55	-104.93	-810.37	-294.42	950.76	925.61	25.16	37.795	
7,400.00	7,388.93	7,391.56	7,381.15	14.35	16.88	-104.80	-809.03	-302.31	952.17	926.77	25.41	37.477	
7,500.00	7,488.91	7,491.39	7,480.66	14.66	17.20	-104.45	-807.70	-310.18	952.71	927.09	25.62	37.190	
7,600.00	7,588.91	7,591.44	7,580.53	14.72	17.55	-169.86	-806.72	-316.01	952.76	926.98	25.77	36.971	
7,700.00	7,688.91	7,691.77	7,680.83	14.80	17.93	-169.71	-806.31	-318.41	952.78	926.84	25.94	36.729	
7,800.00	7,788.91	7,791.85	7,780.91	14.87	18.00	-169.71	-806.30	-318.47	952.78	926.69	26.09	36.517	
7,900.00	7,888.91	7,891.85	7,880.91	14.95	18.06	-169.71	-806.30	-318.47	952.78	926.53	26.26	36.287	
8,000.00	7,988.91	7,991.85	7,980.91	15.02	18.12	-169.71	-806.30	-318.47	952.78	926.36	26.42	36.057	
8,100.00	8,088.91	8,091.85	8,080.91	15.09	18.18	-169.71	-806.30	-318.47	952.78	926.19	26.59	35.830	
8,200.00	8,188.91	8,191.85	8,180.91	15.17	18.23	-169.71	-806.30	-318.47	952.78	926.02	26.76	35.606	
8,300.00	8,288.91	8,291.85	8,280.91	15.24	18.29	-169.71	-806.30	-318.47	952.78	925.86	26.93	35.385	
8,400.00	8,388.91	8,391.85	8,380.91	15.32	18.35	-169.71	-806.30	-318.47	952.78	925.69	27.09	35.167	
8,500.00	8,488.91	8,491.85	8,480.91	15.39	18.41	-169.71	-806.30	-318.47	952.78	925.52	27.26	34.951	
8,600.00	8,588.91	8,591.85	8,580.91	15.47	18.47	-169.71	-806.30	-318.47	952.78	925.35	27.43	34.738	
8,700.00	8,688.91	8,691.85	8,680.91	15.54	18.53	-169.71	-806.30	-318.47	952.78	925.19	27.59	34.528	
8,800.00	8,788.91	8,791.85	8,780.91	15.61	18.59	-169.71	-806.30	-318.47	952.78	925.02	27.76	34.320	
8,900.00	8,888.91	8,891.85	8,880.91	15.69	18.65	-169.71	-806.30	-318.47	952.78	924.85	27.93	34.115	
9,000.00	8,988.91	8,991.85	8,980.91	15.76	18.71	-169.71	-806.30	-318.47	952.78	924.69	28.10	33.912	
9,100.00	9,088.91	9,091.85	9,080.91	15.84	18.77	-169.71	-806.30	-318.47	952.78	924.52	28.26	33.712	
9,200.00	9,188.91	9,191.85	9,180.91	15.91	18.83	-169.71	-806.30	-318.47	952.78	924.35	28.43	33.514	
9,300.00	9,288.91	9,291.85	9,280.91	15.99	18.89	-169.71	-806.30	-318.47	952.78	924.19	28.60	33.318	
9,400.00	9,388.91	9,391.85	9,380.91	16.06	18.95	-169.71	-806.30	-318.47	952.78	924.02	28.76	33.125	
9,500.00	9,488.91	9,491.85	9,480.91	16.14	19.01	-169.71	-806.30	-318.47	952.78	923.85	28.93	32.934	
9,600.00	9,588.91	9,591.85	9,580.91	16.21	19.07	-169.71	-806.30	-318.47	952.78	923.69	29.10	32.746	
9,700.00	9,688.91	9,691.85	9,680.91	16.29	19.13	-169.71	-806.30	-318.47	952.78	923.52	29.26	32.559	
9,800.00	9,788.91	9,791.85	9,780.91	16.37	19.19	-169.71	-806.30	-318.47	952.78	923.35	29.43	32.375	
9,900.00	9,888.91	9,891.85	9,880.91	16.44	19.25	-169.71	-806.30	-318.47	952.78	923.19	29.60	32.193	
10,000.00	9,988.91	9,991.85	9,980.91	16.52	19.31	-169.71	-806.30	-318.47	952.78	923.02	29.76	32.013	
10,100.00	10,088.91	10,091.85	10,080.91	16.59	19.38	-169.71	-806.30	-318.47	952.78	922.85	29.93	31.834	
10,200.00	10,188.91	10,191.85	10,180.91	16.67	19.44	-169.71	-806.30	-318.47	952.78	922.69	30.10	31.658	

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

FLAT CREEK
RESOURCES

Anticollision Report

Company:	Flat Creek Resources, LLC	Local Co-ordinate Reference:	Well Phantom Bank 31 Fed Com No. 511H
Project:	Eddy County, New Mexico NAD27 NME	TVD Reference:	RKB=3129+25 @ 3154.00ft
Reference Site:	Phantom Bank 31 Fed Com	MD Reference:	RKB=3129+25 @ 3154.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Phantom Bank 31 Fed Com No. 511H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev2	Offset TVD Reference:	Offset Datum

Offset Design: Phantom Bank 31 Fed Com - Phantom Bank 31 Fed Com No. 707H - Original Hole - rev0												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference	Offset	Rule Assigned:											
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
10,300.00	10,288.91	10,291.85	10,280.91	16.74	19.50	-169.71	-806.30	-318.47	952.78	922.52	30.26	31.484	
10,400.00	10,388.91	10,391.85	10,380.91	16.82	19.56	-169.71	-806.30	-318.47	952.78	922.35	30.43	31.312	
10,500.00	10,488.91	10,491.85	10,480.91	16.89	19.62	-169.71	-806.30	-318.47	952.78	922.19	30.59	31.142	
10,501.38	10,490.28	10,493.23	10,482.28	16.90	19.62	-169.71	-806.30	-318.47	952.78	922.19	30.60	31.140	
10,600.00	10,588.91	10,575.94	10,564.93	16.97	19.80	-169.58	-806.31	-320.58	953.31	922.58	30.72	31.029	
10,700.00	10,688.91	10,650.00	10,637.97	17.05	20.34	-168.88	-806.37	-332.44	956.41	925.51	30.90	30.952	
10,800.00	10,788.91	10,717.13	10,702.13	17.12	20.88	-167.74	-806.48	-352.04	962.75	931.58	31.17	30.888	
10,900.00	10,888.91	10,779.37	10,758.91	17.20	21.37	-166.27	-806.61	-377.45	973.04	941.49	31.56	30.836	
11,000.00	10,988.91	10,834.74	10,806.56	17.27	21.78	-164.66	-806.75	-405.60	988.07	955.99	32.09	30.792	
11,100.00	11,088.91	10,883.27	10,845.66	17.35	22.11	-163.04	-806.90	-434.31	1,008.52	975.73	32.79	30.758	
11,200.00	11,188.91	10,925.47	10,877.36	17.43	22.37	-161.50	-807.05	-462.14	1,034.83	1,001.19	33.65	30.755	
11,300.00	11,288.91	10,950.00	10,894.72	17.50	22.52	-160.56	-807.14	-479.47	1,067.35	1,032.73	34.62	30.829	
11,400.00	11,388.91	11,000.00	10,927.48	17.58	22.78	-158.54	-807.33	-517.22	1,105.66	1,069.92	35.74	30.934	
11,500.00	11,488.90	11,021.30	10,940.31	17.65	22.88	-73.30	-807.42	-534.22	1,149.82	1,112.94	36.88	31.180	
11,600.00	11,588.21	11,050.00	10,956.47	17.97	23.02	-67.26	-807.54	-557.93	1,196.50	1,158.47	38.03	31.461	
11,700.00	11,684.17	11,078.20	10,971.06	18.46	23.13	-61.79	-807.67	-582.07	1,242.14	1,202.93	39.21	31.676	
11,800.00	11,773.87	11,100.00	10,981.43	18.98	23.21	-57.19	-807.77	-601.24	1,285.09	1,244.75	40.34	31.859	
11,900.00	11,854.58	11,150.00	11,002.11	19.49	23.37	-52.94	-808.00	-646.74	1,323.74	1,282.17	41.57	31.847	
12,000.00	11,923.84	11,173.57	11,010.33	19.96	23.43	-49.95	-808.12	-668.82	1,356.93	1,314.31	42.61	31.842	
12,100.00	11,979.56	11,200.00	11,018.35	20.39	23.50	-47.57	-808.25	-694.01	1,383.97	1,340.39	43.58	31.754	
12,200.00	12,020.29	11,250.00	11,029.97	20.88	23.59	-45.38	-808.50	-742.62	1,402.54	1,357.80	44.74	31.350	
12,300.00	12,044.96	11,274.26	11,033.92	21.68	23.62	-44.36	-808.62	-766.54	1,411.10	1,365.37	45.74	30.854	
12,400.00	12,052.83	11,300.00	11,036.89	22.89	23.66	-44.29	-808.76	-792.11	1,409.81	1,363.06	46.75	30.158	
12,500.00	12,051.38	11,352.84	11,039.00	24.38	23.71	-44.38	-809.03	-844.89	1,405.16	1,357.11	48.05	29.245	
12,600.00	12,049.92	11,421.76	11,038.27	26.06	23.81	-44.37	-809.39	-913.80	1,403.89	1,354.48	49.41	28.411	
12,700.00	12,048.46	11,521.75	11,037.20	27.87	24.41	-44.35	-809.90	-1,013.79	1,402.97	1,351.74	51.23	27.385	
12,800.00	12,046.99	11,621.75	11,036.13	29.77	26.01	-44.34	-810.42	-1,113.78	1,402.04	1,348.81	53.23	26.340	
12,900.00	12,045.53	11,721.74	11,035.07	31.75	27.93	-44.32	-810.94	-1,213.77	1,401.12	1,345.73	55.39	25.297	
13,000.00	12,044.07	11,821.74	11,034.00	33.80	29.95	-44.30	-811.46	-1,313.76	1,400.20	1,342.51	57.68	24.274	
13,100.00	12,042.60	11,921.73	11,032.94	35.89	32.05	-44.29	-811.98	-1,413.74	1,399.27	1,339.17	60.10	23.281	
13,200.00	12,041.14	12,021.73	11,031.87	38.03	34.19	-44.27	-812.49	-1,513.73	1,398.35	1,335.72	62.63	22.326	
13,300.00	12,039.68	12,121.72	11,030.80	40.20	36.37	-44.26	-813.01	-1,613.72	1,397.43	1,332.17	65.26	21.413	
13,400.00	12,038.22	12,221.72	11,029.74	42.40	38.58	-44.24	-813.53	-1,713.71	1,396.51	1,328.53	67.97	20.545	
13,500.00	12,036.75	12,321.71	11,028.67	44.63	40.83	-44.23	-814.05	-1,813.70	1,395.58	1,324.83	70.76	19.724	
13,600.00	12,035.29	12,421.71	11,027.60	46.87	43.09	-44.21	-814.56	-1,913.68	1,394.66	1,321.05	73.61	18.947	
13,700.00	12,033.83	12,521.70	11,026.54	49.14	45.37	-44.20	-815.08	-2,013.67	1,393.74	1,317.22	76.52	18.214	
13,800.00	12,032.36	12,621.70	11,025.47	51.42	47.66	-44.18	-815.60	-2,113.66	1,392.82	1,313.34	79.48	17.524	
13,900.00	12,030.90	12,721.69	11,024.41	53.72	49.97	-44.16	-816.12	-2,213.65	1,391.89	1,309.41	82.49	16.874	
14,000.00	12,029.44	12,821.69	11,023.34	56.02	52.30	-44.15	-816.64	-2,313.64	1,390.97	1,305.44	85.54	16.262	
14,100.00	12,027.98	12,921.68	11,022.27	58.34	54.63	-44.13	-817.15	-2,413.62	1,390.05	1,301.43	88.62	15.685	
14,200.00	12,026.51	13,021.68	11,021.21	60.67	56.97	-44.12	-817.67	-2,513.61	1,389.13	1,297.39	91.74	15.142	
14,300.00	12,025.05	13,121.67	11,020.14	63.01	59.32	-44.10	-818.19	-2,613.60	1,388.21	1,293.32	94.88	14.630	
14,400.00	12,023.59	13,221.67	11,019.07	65.35	61.67	-44.09	-818.71	-2,713.59	1,387.29	1,289.23	98.06	14.148	
14,500.00	12,022.12	13,321.66	11,018.01	67.70	64.04	-44.07	-819.23	-2,813.58	1,386.36	1,285.11	101.25	13.692	
14,600.00	12,020.66	13,421.66	11,016.94	70.06	66.40	-44.05	-819.74	-2,913.56	1,385.44	1,280.97	104.47	13.261	
14,700.00	12,019.20	13,521.65	11,015.87	72.42	68.78	-44.04	-820.26	-3,013.55	1,384.52	1,276.81	107.71	12.854	
14,800.00	12,017.74	13,621.65	11,014.81	74.79	71.15	-44.02	-820.78	-3,113.54	1,383.60	1,272.64	110.96	12.469	
14,900.00	12,016.27	13,721.64	11,013.74	77.16	73.54	-44.01	-821.30	-3,213.53	1,382.68	1,268.45	114.23	12.104	
15,000.00	12,014.81	13,821.64	11,012.68	79.54	75.92	-43.99	-821.82	-3,313.52	1,381.76	1,264.24	117.51	11.758	
15,100.00	12,013.35	13,921.64	11,011.61	81.92	78.31	-43.98	-822.33	-3,413.50	1,380.84	1,260.03	120.81	11.430	
15,200.00	12,011.88	14,021.63	11,010.54	84.30	80.70	-43.96	-822.85	-3,513.49	1,379.92	1,255.80	124.12	11.118	
15,300.00	12,010.42	14,121.63	11,009.48	86.69	83.09	-43.94	-823.37	-3,613.48	1,379.00	1,251.56	127.44	10.821	

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

FLAT CREEK
RESOURCES

Anticollision Report

Company:	Flat Creek Resources, LLC	Local Co-ordinate Reference:	Well Phantom Bank 31 Fed Com No. 511H
Project:	Eddy County, New Mexico NAD27 NME	TVD Reference:	RKB=3129+25 @ 3154.00ft
Reference Site:	Phantom Bank 31 Fed Com	MD Reference:	RKB=3129+25 @ 3154.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Phantom Bank 31 Fed Com No. 511H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev2	Offset TVD Reference:	Offset Datum

Offset Design: Phantom Bank 31 Fed Com - Phantom Bank 31 Fed Com No. 707H - Original Hole - rev0													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				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	
15,400.00	12,008.96	14,221.62	11,008.41	89.07	85.49	-43.93	-823.89	-3,713.47	1,378.08	1,247.31	130.77	10.538	
15,500.00	12,007.50	14,321.62	11,007.34	91.47	87.89	-43.91	-824.41	-3,813.46	1,377.16	1,243.05	134.10	10.269	
15,600.00	12,006.03	14,421.61	11,006.28	93.86	90.29	-43.90	-824.92	-3,913.44	1,376.24	1,238.79	137.45	10.013	
15,700.00	12,004.57	14,521.61	11,005.21	96.26	92.69	-43.88	-825.44	-4,013.43	1,375.31	1,234.51	140.80	9.768	
15,800.00	12,003.11	14,621.60	11,004.15	98.66	95.10	-43.86	-825.96	-4,113.42	1,374.39	1,230.23	144.16	9.534	
15,900.00	12,001.64	14,721.60	11,003.08	101.06	97.50	-43.85	-826.48	-4,213.41	1,373.47	1,225.95	147.53	9.310	
16,000.00	12,000.18	14,821.59	11,002.01	103.46	99.91	-43.83	-826.99	-4,313.40	1,372.56	1,221.66	150.90	9.096	
16,100.00	11,998.72	14,921.59	11,000.95	105.86	102.32	-43.82	-827.51	-4,413.38	1,371.64	1,217.36	154.28	8.891	
16,200.00	11,997.26	15,021.58	10,999.88	108.27	104.73	-43.80	-828.03	-4,513.37	1,370.72	1,213.06	157.66	8.694	
16,300.00	11,995.79	15,121.58	10,998.81	110.68	107.14	-43.78	-828.55	-4,613.36	1,369.80	1,208.75	161.04	8.506	
16,400.00	11,994.33	15,221.57	10,997.75	113.09	109.56	-43.77	-829.07	-4,713.35	1,368.88	1,204.45	164.43	8.325	
16,500.00	11,992.87	15,321.57	10,996.68	115.50	111.97	-43.75	-829.58	-4,813.34	1,367.96	1,200.13	167.82	8.151	
16,600.00	11,991.41	15,421.56	10,995.62	117.91	114.39	-43.73	-830.10	-4,913.32	1,367.04	1,195.82	171.22	7.984	
16,700.00	11,989.94	15,521.56	10,994.55	120.32	116.80	-43.72	-830.62	-5,013.31	1,366.12	1,191.50	174.62	7.823	
16,800.00	11,988.48	15,621.55	10,993.48	122.73	119.22	-43.70	-831.14	-5,113.30	1,365.20	1,187.18	178.02	7.669	
16,900.00	11,987.02	15,721.55	10,992.42	125.15	121.64	-43.69	-831.66	-5,213.29	1,364.28	1,182.86	181.42	7.520	
17,000.00	11,985.55	15,821.54	10,991.35	127.56	124.06	-43.67	-832.17	-5,313.28	1,363.36	1,178.53	184.83	7.376	
17,100.00	11,984.09	15,921.54	10,990.28	129.98	126.48	-43.65	-832.69	-5,413.26	1,362.44	1,174.21	188.24	7.238	
17,175.07	11,982.99	15,996.61	10,989.48	131.79	128.30	-43.64	-833.08	-5,488.33	1,361.75	1,170.96	190.80	7.137 SF	

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

FLAT CREEK
RESOURCES

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Reference Site:	Phantom Bank 31 Fed Com	MD Reference:	RKB=3129+25 @ 3154.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Phantom Bank 31 Fed Com No. 511H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev2	Offset TVD Reference:	Offset Datum

Offset Design: Phantom Bank 31 Fed Com - Phantom Bank 31 Fed Com No. 708H - Original Hole - rev2													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)			
0.00	0.00	0.00	0.00	0.00	0.00	-174.30	-923.01	-92.12	927.72				
100.00	100.00	85.00	85.00	0.43	0.36	-174.30	-923.01	-92.12	927.59	926.80	0.79	1,169.728	
200.00	200.00	185.00	185.00	1.25	1.13	-174.30	-923.01	-92.12	927.59	925.21	2.38	389.515	
300.00	300.00	285.00	285.00	1.75	1.67	-174.30	-923.01	-92.12	927.59	924.17	3.42	271.251	
400.00	400.00	385.00	385.00	2.13	2.07	-174.30	-923.01	-92.12	927.59	923.39	4.21	220.468	
500.00	500.00	485.00	485.00	2.46	2.41	-174.30	-923.01	-92.12	927.59	922.72	4.87	190.346	
600.00	600.00	585.00	585.00	2.75	2.71	-174.30	-923.01	-92.12	927.59	922.13	5.46	169.802	
700.00	700.00	685.00	685.00	3.02	2.98	-174.30	-923.01	-92.12	927.59	921.60	6.00	154.626	
800.00	800.00	785.00	785.00	3.27	3.23	-174.30	-923.01	-92.12	927.59	921.10	6.49	142.818	
900.00	900.00	885.00	885.00	3.50	3.46	-174.30	-923.01	-92.12	927.59	920.63	6.96	133.286	
1,000.00	1,000.00	985.00	985.00	3.72	3.68	-174.30	-923.01	-92.12	927.59	920.20	7.40	125.378	
1,100.00	1,100.00	1,085.00	1,085.00	3.92	3.89	-174.30	-923.01	-92.12	927.59	919.78	7.82	118.677	
1,200.00	1,200.00	1,185.00	1,185.00	4.12	4.09	-174.30	-923.01	-92.12	927.59	919.38	8.22	112.903	
1,300.00	1,300.00	1,285.00	1,285.00	4.31	4.29	-174.30	-923.01	-92.12	927.59	918.99	8.60	107.859	
1,400.00	1,400.00	1,385.00	1,385.00	4.50	4.47	-174.30	-923.01	-92.12	927.59	918.62	8.97	103.401	
1,500.00	1,500.00	1,485.00	1,485.00	4.68	4.65	-174.30	-923.01	-92.12	927.59	918.26	9.33	99.424	
1,600.00	1,600.00	1,585.00	1,585.00	4.85	4.83	-174.30	-923.01	-92.12	927.59	917.92	9.68	95.846	
1,700.00	1,700.00	1,685.00	1,685.00	5.02	5.00	-174.30	-923.01	-92.12	927.59	917.58	10.02	92.603	
1,800.00	1,800.00	1,785.00	1,785.00	5.19	5.16	-174.30	-923.01	-92.12	927.59	917.25	10.35	89.647	
1,900.00	1,900.00	1,885.00	1,885.00	5.35	5.32	-174.30	-923.01	-92.12	927.59	916.92	10.67	86.936	
2,000.00	2,000.00	1,985.00	1,985.00	5.50	5.48	-174.30	-923.01	-92.12	927.59	916.61	10.99	84.439	
2,100.00	2,099.99	2,084.99	2,084.99	5.65	5.64	140.73	-923.01	-92.12	928.27	916.98	11.29	82.240	
2,200.00	2,199.96	2,184.96	2,184.96	5.81	5.79	140.82	-923.01	-92.12	930.30	918.71	11.59	80.251	
2,300.00	2,299.86	2,284.86	2,284.86	5.98	5.94	140.97	-923.01	-92.12	933.68	921.78	11.90	78.442	
2,400.00	2,399.73	2,384.73	2,384.73	6.17	6.08	141.17	-923.01	-92.12	937.76	925.54	12.22	76.740	
2,500.00	2,499.59	2,484.59	2,484.59	6.37	6.23	141.37	-923.01	-92.12	941.84	929.30	12.54	75.093	
2,600.00	2,599.45	2,584.45	2,584.45	6.58	6.37	141.56	-923.01	-92.12	945.94	933.07	12.87	73.499	
2,700.00	2,699.31	2,684.31	2,684.31	6.80	6.51	141.76	-923.01	-92.12	950.04	936.84	13.20	71.958	
2,800.00	2,799.18	2,784.18	2,784.18	7.04	6.65	141.96	-923.01	-92.12	954.16	940.62	13.54	70.470	
2,900.00	2,899.04	2,884.04	2,884.04	7.28	6.78	142.15	-923.01	-92.12	958.29	944.41	13.88	69.033	
3,000.00	2,998.90	2,983.90	2,983.90	7.53	6.92	142.34	-923.01	-92.12	962.43	948.20	14.23	67.647	
3,100.00	3,098.77	3,083.77	3,083.77	7.78	7.05	142.53	-923.01	-92.12	966.58	952.01	14.58	66.309	
3,200.00	3,198.63	3,183.63	3,183.63	8.05	7.18	142.72	-923.01	-92.12	970.74	955.81	14.93	65.020	
3,300.00	3,298.53	3,283.53	3,283.53	8.31	7.31	142.89	-923.01	-92.12	974.22	958.94	15.28	63.759	
3,400.00	3,398.50	3,383.50	3,383.50	8.55	7.44	143.00	-923.01	-92.12	976.31	960.69	15.62	62.520	
3,500.00	3,498.49	3,483.49	3,483.49	8.72	7.56	-171.97	-923.01	-92.12	977.01	961.11	15.90	61.454	
3,600.00	3,598.49	3,583.49	3,583.49	8.83	7.69	-171.97	-923.01	-92.12	977.01	960.87	16.13	60.555	
3,700.00	3,698.49	3,683.49	3,683.49	8.93	7.81	-171.97	-923.01	-92.12	977.01	960.64	16.37	59.690	
3,800.00	3,798.49	3,783.49	3,783.49	9.04	7.94	-171.97	-923.01	-92.12	977.01	960.41	16.60	58.854	
3,900.00	3,898.49	3,883.49	3,883.49	9.14	8.06	-171.97	-923.01	-92.12	977.01	960.18	16.83	58.048	
4,000.00	3,998.49	3,983.49	3,983.49	9.24	8.18	-171.97	-923.01	-92.12	977.01	959.95	17.06	57.269	
4,100.00	4,098.49	4,083.49	4,083.49	9.35	8.30	-171.97	-923.01	-92.12	977.01	959.72	17.29	56.515	
4,200.00	4,198.49	4,183.49	4,183.49	9.45	8.42	-171.97	-923.01	-92.12	977.01	959.49	17.51	55.785	
4,300.00	4,298.49	4,283.49	4,283.49	9.55	8.54	-171.97	-923.01	-92.12	977.01	959.27	17.74	55.079	
4,400.00	4,398.49	4,383.49	4,383.49	9.65	8.66	-171.97	-923.01	-92.12	977.01	959.04	17.96	54.394	
4,500.00	4,498.49	4,483.49	4,483.49	9.75	8.78	-171.97	-923.01	-92.12	977.01	958.82	18.18	53.730	
4,600.00	4,598.49	4,583.49	4,583.49	9.86	8.89	-171.97	-923.01	-92.12	977.01	958.60	18.40	53.086	
4,700.00	4,698.49	4,683.49	4,683.49	9.96	9.01	-171.97	-923.01	-92.12	977.01	958.38	18.62	52.460	
4,800.00	4,798.49	4,783.49	4,783.49	10.06	9.12	-171.97	-923.01	-92.12	977.01	958.16	18.84	51.852	
4,900.00	4,898.49	4,883.49	4,883.49	10.16	9.24	-171.97	-923.01	-92.12	977.01	957.95	19.06	51.261	
5,000.00	4,998.49	4,983.49	4,983.49	10.26	9.35	-171.97	-923.01	-92.12	977.01	957.73	19.28	50.682	
5,100.00	5,098.47	5,107.62	5,107.59	10.51	9.58	-106.25	-921.48	-93.44	976.45	956.71	19.74	49.464	

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



FLAT CREEK
RESOURCES

Anticollision Report

Company:	Flat Creek Resources, LLC	Local Co-ordinate Reference:	Well Phantom Bank 31 Fed Com No. 511H
Project:	Eddy County, New Mexico NAD27 NME	TVD Reference:	RKB=3129+25 @ 3154.00ft
Reference Site:	Phantom Bank 31 Fed Com	MD Reference:	RKB=3129+25 @ 3154.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Phantom Bank 31 Fed Com No. 511H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev2	Offset TVD Reference:	Offset Datum

Offset Design: Phantom Bank 31 Fed Com - Phantom Bank 31 Fed Com No. 708H - Original Hole - rev2												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)			
5,200.00	5,198.33	5,236.43	5,236.16	10.82	10.03	-106.33	-915.64	-98.50	973.95	953.56	20.39	47.767	
5,300.00	5,297.97	5,345.17	5,344.42	10.84	10.20	-106.45	-907.93	-105.16	970.15	949.55	20.60	47.100	
5,400.00	5,397.52	5,445.08	5,443.87	10.89	10.34	-106.56	-900.67	-111.45	966.47	945.65	20.82	46.424	
5,500.00	5,497.07	5,545.00	5,543.32	10.96	10.49	-106.67	-893.41	-117.73	962.80	941.73	21.07	45.705	
5,600.00	5,596.63	5,644.91	5,642.78	11.04	10.66	-106.78	-886.14	-124.02	959.13	937.80	21.32	44.982	
5,700.00	5,696.18	5,744.83	5,742.23	11.13	10.84	-106.89	-878.88	-130.30	955.46	933.87	21.59	44.256	
5,800.00	5,795.74	5,844.74	5,841.68	11.24	11.03	-107.00	-871.62	-136.59	951.79	929.93	21.87	43.530	
5,900.00	5,895.29	5,944.66	5,941.13	11.36	11.24	-107.12	-864.35	-142.88	948.13	925.98	22.15	42.805	
6,000.00	5,994.84	6,044.57	6,040.59	11.49	11.45	-107.23	-857.09	-149.16	944.48	922.03	22.44	42.081	
6,100.00	6,094.40	6,144.49	6,140.04	11.63	11.67	-107.34	-849.83	-155.45	940.82	918.08	22.75	41.361	
6,200.00	6,193.95	6,244.41	6,239.49	11.78	11.90	-107.46	-842.56	-161.73	937.17	914.12	23.06	40.645	
6,300.00	6,293.50	6,344.32	6,338.95	11.94	12.14	-107.57	-835.30	-168.02	933.53	910.15	23.38	39.934	
6,400.00	6,393.06	6,441.74	6,435.92	12.11	12.37	-107.69	-828.23	-174.13	929.91	906.22	23.68	39.266	
6,500.00	6,492.61	6,523.70	6,517.62	12.30	12.60	-107.85	-823.40	-178.31	927.50	903.52	23.98	38.671	
6,572.59	6,564.88	6,583.13	6,576.97	12.44	12.82	-108.04	-821.01	-180.39	926.99	902.75	24.24	38.246 CC	
6,600.00	6,592.17	6,600.00	6,593.82	12.49	12.88	-108.10	-820.50	-180.83	927.08	902.76	24.32	38.123	
6,700.00	6,691.72	6,687.16	6,680.96	12.69	13.17	-108.50	-819.06	-182.07	928.60	903.86	24.74	37.535	
6,800.00	6,791.27	6,782.47	6,776.27	12.90	13.33	-109.02	-819.01	-182.12	931.59	906.50	25.09	37.124	
6,900.00	6,890.83	6,882.03	6,875.83	13.12	13.42	-109.57	-819.01	-182.12	934.72	909.35	25.38	36.832	
7,000.00	6,990.38	6,981.58	6,975.38	13.35	13.51	-110.11	-819.01	-182.12	937.94	912.29	25.65	36.561	
7,100.00	7,089.93	7,081.13	7,074.93	13.58	13.60	-110.65	-819.01	-182.12	941.24	915.30	25.93	36.294	
7,200.00	7,189.49	7,180.69	7,174.49	13.83	13.68	-111.18	-819.01	-182.12	944.62	918.40	26.22	36.029	
7,300.00	7,289.10	7,280.30	7,274.10	14.05	13.77	-111.71	-819.01	-182.12	947.85	921.38	26.47	35.808	
7,400.00	7,388.93	7,380.13	7,373.93	14.35	13.85	-112.06	-819.01	-182.12	949.95	923.21	26.74	35.527	
7,500.00	7,488.91	7,480.11	7,473.91	14.66	13.94	-112.20	-819.01	-182.12	950.75	923.77	26.98	35.239	
7,600.00	7,588.91	7,580.11	7,573.91	14.72	14.02	-117.96	-819.01	-182.12	950.76	923.63	27.14	35.038	
7,700.00	7,688.91	7,680.11	7,673.91	14.80	14.11	-177.96	-819.01	-182.12	950.76	923.46	27.30	34.821	
7,800.00	7,788.91	7,780.11	7,773.91	14.87	14.20	-177.96	-819.01	-182.12	950.76	923.29	27.47	34.605	
7,900.00	7,888.91	7,880.11	7,873.91	14.95	14.28	-177.96	-819.01	-182.12	950.76	923.12	27.64	34.392	
8,000.00	7,988.91	7,980.11	7,973.91	15.02	14.37	-177.96	-819.01	-182.12	950.76	922.95	27.81	34.182	
8,100.00	8,088.91	8,080.11	8,073.91	15.09	14.45	-177.96	-819.01	-182.12	950.76	922.78	27.98	33.974	
8,200.00	8,188.91	8,180.11	8,173.91	15.17	14.54	-177.96	-819.01	-182.12	950.76	922.61	28.15	33.769	
8,300.00	8,288.91	8,280.11	8,273.91	15.24	14.62	-177.96	-819.01	-182.12	950.76	922.44	28.32	33.567	
8,400.00	8,388.91	8,380.11	8,373.91	15.32	14.71	-177.96	-819.01	-182.12	950.76	922.27	28.49	33.367	
8,500.00	8,488.91	8,480.11	8,473.91	15.39	14.80	-177.96	-819.01	-182.12	950.76	922.10	28.66	33.169	
8,600.00	8,588.91	8,580.11	8,573.91	15.47	14.88	-177.96	-819.01	-182.12	950.76	921.93	28.83	32.974	
8,700.00	8,688.91	8,680.11	8,673.91	15.54	14.97	-177.96	-819.01	-182.12	950.76	921.76	29.00	32.782	
8,800.00	8,788.91	8,780.11	8,773.91	15.61	15.05	-177.96	-819.01	-182.12	950.76	921.59	29.17	32.591	
8,900.00	8,888.91	8,880.11	8,873.91	15.69	15.14	-177.96	-819.01	-182.12	950.76	921.42	29.34	32.403	
9,000.00	8,988.91	8,980.11	8,973.91	15.76	15.22	-177.96	-819.01	-182.12	950.76	921.25	29.51	32.217	
9,100.00	9,088.91	9,080.11	9,073.91	15.84	15.31	-177.96	-819.01	-182.12	950.76	921.08	29.68	32.034	
9,200.00	9,188.91	9,180.11	9,173.91	15.91	15.39	-177.96	-819.01	-182.12	950.76	920.91	29.85	31.852	
9,300.00	9,288.91	9,280.11	9,273.91	15.99	15.48	-177.96	-819.01	-182.12	950.76	920.74	30.02	31.673	
9,400.00	9,388.91	9,380.11	9,373.91	16.06	15.56	-177.96	-819.01	-182.12	950.76	920.58	30.19	31.495	
9,500.00	9,488.91	9,480.11	9,473.91	16.14	15.65	-177.96	-819.01	-182.12	950.76	920.41	30.36	31.320	
9,600.00	9,588.91	9,580.11	9,573.91	16.21	15.73	-177.96	-819.01	-182.12	950.76	920.24	30.53	31.147	
9,700.00	9,688.91	9,680.11	9,673.91	16.29	15.82	-177.96	-819.01	-182.12	950.76	920.07	30.69	30.976	
9,800.00	9,788.91	9,780.11	9,773.91	16.37	15.90	-177.96	-819.01	-182.12	950.76	919.90	30.86	30.806	
9,900.00	9,888.91	9,880.11	9,873.91	16.44	15.99	-177.96	-819.01	-182.12	950.76	919.73	31.03	30.639	
10,000.00	9,988.91	9,980.11	9,973.91	16.52	16.07	-177.96	-819.01	-182.12	950.76	919.56	31.20	30.473	
10,100.00	10,088.91	10,080.11	10,073.91	16.59	16.16	-177.96	-819.01	-182.12	950.76	919.39	31.37	30.310	
10,200.00	10,188.91	10,180.11	10,173.91	16.67	16.24	-177.96	-819.01	-182.12	950.76	919.23	31.54	30.148	

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



FLAT CREEK
RESOURCES

Anticollision Report

Company:	Flat Creek Resources, LLC	Local Co-ordinate Reference:	Well Phantom Bank 31 Fed Com No. 511H
Project:	Eddy County, New Mexico NAD27 NME	TVD Reference:	RKB=3129+25 @ 3154.00ft
Reference Site:	Phantom Bank 31 Fed Com	MD Reference:	RKB=3129+25 @ 3154.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Phantom Bank 31 Fed Com No. 511H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev2	Offset TVD Reference:	Offset Datum

Offset Design: Phantom Bank 31 Fed Com - Phantom Bank 31 Fed Com No. 708H - Original Hole - rev2													Offset Site Error: 0.00 ft	
Survey Program:		0-MWD						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	
10,300.00	10,288.91	10,280.11	10,273.91	16.74	16.33	-177.96	-819.01	-182.12	950.76	919.06	31.71	29.987		
10,400.00	10,388.91	10,380.11	10,373.91	16.82	16.41	-177.96	-819.01	-182.12	950.76	918.89	31.87	29.829		
10,500.00	10,488.91	10,480.11	10,473.91	16.89	16.50	-177.96	-819.01	-182.12	950.76	918.72	32.04	29.672		
10,600.00	10,588.91	10,580.11	10,573.91	16.97	16.58	-177.96	-819.01	-182.12	950.76	918.55	32.21	29.517		
10,700.00	10,688.91	10,680.11	10,673.91	17.05	16.67	-177.96	-819.01	-182.12	950.76	918.38	32.38	29.364		
10,800.00	10,788.91	10,780.11	10,773.91	17.12	16.75	-177.96	-819.01	-182.12	950.76	918.22	32.55	29.212		
10,900.00	10,888.91	10,880.11	10,873.91	17.20	16.83	-177.96	-819.01	-182.12	950.76	918.05	32.71	29.062		
11,000.00	10,988.91	10,980.11	10,973.91	17.27	16.92	-177.96	-819.01	-182.12	950.76	917.88	32.88	28.914		
11,100.00	11,088.91	11,080.11	11,073.91	17.35	17.00	-177.96	-819.01	-182.12	950.76	917.71	33.05	28.767		
11,200.00	11,188.91	11,180.11	11,173.91	17.43	17.09	-177.96	-819.01	-182.12	950.76	917.54	33.22	28.621		
11,300.00	11,288.91	11,280.11	11,273.91	17.50	17.17	-177.96	-819.01	-182.12	950.76	917.38	33.39	28.477		
11,400.00	11,388.91	11,380.11	11,373.91	17.58	17.26	-177.96	-819.01	-182.12	950.76	917.21	33.55	28.335		
11,407.04	11,395.95	11,387.15	11,380.95	17.58	17.26	-94.16	-819.01	-182.12	950.76	917.20	33.57	28.326		
11,500.00	11,488.90	11,480.11	11,473.90	17.65	17.34	-94.16	-819.01	-182.12	950.77	917.06	33.71	28.207		
11,600.00	11,588.21	11,579.58	11,573.00	17.97	17.54	-94.28	-818.79	-189.30	951.58	917.75	33.83	28.126		
11,700.00	11,684.17	11,679.55	11,669.84	18.46	17.95	-94.28	-818.05	-213.59	953.73	919.66	34.07	27.996		
11,800.00	11,773.87	11,780.09	11,761.49	18.98	18.42	-94.13	-816.79	-254.59	957.15	922.70	34.45	27.783		
11,900.00	11,854.58	11,881.17	11,844.99	19.49	18.89	-93.87	-815.06	-311.30	961.74	926.68	35.06	27.433		
12,000.00	11,923.84	11,982.75	11,917.56	19.96	19.31	-93.48	-812.90	-382.15	967.35	931.36	36.00	26.874		
12,100.00	11,979.56	12,084.79	11,976.73	20.39	19.68	-92.85	-810.36	-465.09	973.79	936.42	37.37	26.059		
12,200.00	12,020.29	12,176.71	12,016.70	20.88	20.01	-91.50	-808.31	-547.73	978.95	939.75	39.21	24.969		
12,300.00	12,044.96	12,268.75	12,043.01	21.68	20.60	-90.91	-807.09	-635.81	981.67	940.16	41.51	23.648		
12,400.00	12,052.83	12,361.43	12,054.94	22.89	21.60	-91.00	-806.75	-727.62	981.88	937.66	44.22	22.205		
12,500.00	12,051.38	12,458.70	12,054.49	24.38	22.99	-91.07	-807.18	-824.86	980.90	933.61	47.29	20.740		
12,600.00	12,049.92	12,558.69	12,052.75	26.06	24.60	-91.05	-807.70	-924.84	979.98	929.32	50.66	19.345		
12,700.00	12,048.46	12,658.69	12,051.01	27.87	26.36	-91.04	-808.21	-1,024.82	979.06	924.80	54.26	18.045		
12,800.00	12,046.99	12,758.68	12,049.26	29.77	28.22	-91.02	-808.73	-1,124.80	978.14	920.10	58.04	16.852		
12,900.00	12,045.53	12,858.68	12,047.52	31.75	30.18	-91.00	-809.24	-1,224.78	977.22	915.24	61.98	15.766		
13,000.00	12,044.07	12,958.67	12,045.78	33.80	32.19	-90.99	-809.76	-1,324.75	976.30	910.25	66.05	14.782		
13,100.00	12,042.60	13,058.67	12,044.03	35.89	34.27	-90.97	-810.28	-1,424.73	975.38	905.16	70.22	13.891		
13,200.00	12,041.14	13,158.66	12,042.29	38.03	36.39	-90.96	-810.79	-1,524.71	974.45	899.98	74.47	13.085		
13,300.00	12,039.68	13,258.66	12,040.55	40.20	38.55	-90.94	-811.31	-1,624.69	973.53	894.73	78.80	12.354		
13,400.00	12,038.22	13,358.65	12,038.80	42.40	40.74	-90.93	-811.83	-1,724.67	972.61	889.42	83.19	11.691		
13,500.00	12,036.75	13,458.65	12,037.06	44.63	42.96	-90.91	-812.34	-1,824.65	971.69	884.06	87.63	11.088		
13,600.00	12,035.29	13,558.64	12,035.32	46.87	45.20	-90.89	-812.86	-1,924.63	970.77	878.65	92.12	10.538		
13,700.00	12,033.83	13,658.64	12,033.57	49.14	47.46	-90.88	-813.38	-2,024.61	969.85	873.21	96.64	10.035		
13,800.00	12,032.36	13,758.64	12,031.83	51.42	49.74	-90.86	-813.89	-2,124.59	968.93	867.73	101.20	9.574		
13,900.00	12,030.90	13,858.63	12,030.09	53.72	52.03	-90.85	-814.41	-2,224.56	968.01	862.22	105.79	9.150		
14,000.00	12,029.44	13,958.63	12,028.34	56.02	54.34	-90.83	-814.93	-2,324.54	967.09	856.69	110.40	8.760		
14,100.00	12,027.98	14,058.62	12,026.60	58.34	56.66	-90.82	-815.44	-2,424.52	966.17	851.13	115.04	8.399		
14,200.00	12,026.51	14,158.62	12,024.86	60.67	58.98	-90.80	-815.96	-2,524.50	965.25	845.56	119.69	8.065		
14,300.00	12,025.05	14,258.61	12,023.11	63.01	61.32	-90.78	-816.48	-2,624.48	964.33	839.97	124.36	7.754		
14,400.00	12,023.59	14,358.61	12,021.37	65.35	63.66	-90.77	-816.99	-2,724.46	963.41	834.36	129.05	7.466		
14,500.00	12,022.12	14,458.60	12,019.63	67.70	66.01	-90.75	-817.51	-2,824.44	962.49	828.74	133.75	7.196		
14,600.00	12,020.66	14,558.60	12,017.88	70.06	68.37	-90.74	-818.03	-2,924.42	961.57	823.11	138.46	6.945		
14,700.00	12,019.20	14,658.59	12,016.14	72.42	70.74	-90.72	-818.54	-3,024.40	960.65	817.46	143.19	6.709		
14,800.00	12,017.74	14,758.59	12,014.40	74.79	73.10	-90.70	-819.06	-3,124.37	959.73	811.81	147.92	6.488		
14,900.00	12,016.27	14,858.58	12,012.65	77.16	75.48	-90.69	-819.58	-3,224.35	958.81	806.14	152.66	6.281		
15,000.00	12,014.81	14,958.58	12,010.91	79.54	77.85	-90.67	-820.09	-3,324.33	957.89	800.47	157.42	6.085		
15,100.00	12,013.35	15,058.58	12,009.16	81.92	80.23	-90.66	-820.61	-3,424.31	956.97	794.79	162.18	5.901		
15,200.00	12,011.88	15,158.57	12,007.42	84.30	82.62	-90.64	-821.13	-3,524.29	956.05	789.11	166.94	5.727		
15,300.00	12,010.42	15,258.57	12,005.68	86.69	85.01	-90.62	-821.64	-3,624.27	955.13	783.41	171.72	5.562		

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

FLAT CREEK
RESOURCES

Anticollision Report

Company:	Flat Creek Resources, LLC	Local Co-ordinate Reference:	Well Phantom Bank 31 Fed Com No. 511H
Project:	Eddy County, New Mexico NAD27 NME	TVD Reference:	RKB=3129+25 @ 3154.00ft
Reference Site:	Phantom Bank 31 Fed Com	MD Reference:	RKB=3129+25 @ 3154.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Phantom Bank 31 Fed Com No. 511H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev2	Offset TVD Reference:	Offset Datum

Offset Design: Phantom Bank 31 Fed Com - Phantom Bank 31 Fed Com No. 708H - Original Hole - rev2												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)			
15,400.00	12,008.96	15,358.56	12,003.93	89.07	87.40	-90.61	-822.16	-3,724.25	954.21	777.72	176.50	5.406	
15,500.00	12,007.50	15,458.56	12,002.19	91.47	89.79	-90.59	-822.67	-3,824.23	953.29	772.01	181.28	5.259	
15,600.00	12,006.03	15,558.55	12,000.45	93.86	92.19	-90.57	-823.19	-3,924.21	952.37	766.30	186.07	5.118	
15,700.00	12,004.57	15,658.55	11,998.70	96.26	94.59	-90.56	-823.71	-4,024.18	951.45	760.59	190.86	4.985	
15,800.00	12,003.11	15,758.54	11,996.96	98.66	96.99	-90.54	-824.22	-4,124.16	950.53	754.87	195.66	4.858	
15,900.00	12,001.64	15,858.54	11,995.22	101.06	99.39	-90.53	-824.74	-4,224.14	949.62	749.15	200.47	4.737	
16,000.00	12,000.18	15,958.53	11,993.47	103.46	101.79	-90.51	-825.26	-4,324.12	948.70	743.43	205.27	4.622	
16,100.00	11,998.72	16,058.53	11,991.73	105.86	104.20	-90.49	-825.77	-4,424.10	947.78	737.70	210.08	4.511	
16,200.00	11,997.26	16,158.53	11,989.99	108.27	106.61	-90.48	-826.29	-4,524.08	946.86	731.97	214.89	4.406	
16,300.00	11,995.79	16,258.52	11,988.24	110.68	109.01	-90.46	-826.81	-4,624.06	945.94	726.23	219.71	4.305	
16,400.00	11,994.33	16,358.52	11,986.50	113.09	111.43	-90.44	-827.32	-4,724.04	945.02	720.49	224.53	4.209	
16,500.00	11,992.87	16,458.51	11,984.76	115.50	113.84	-90.43	-827.84	-4,824.02	944.10	714.75	229.35	4.116	
16,600.00	11,991.41	16,558.51	11,983.01	117.91	116.25	-90.41	-828.36	-4,923.99	943.19	709.01	234.17	4.028	
16,700.00	11,989.94	16,658.50	11,981.27	120.32	118.66	-90.39	-828.87	-5,023.97	942.27	703.27	239.00	3.943	
16,800.00	11,988.48	16,758.50	11,979.53	122.73	121.08	-90.38	-829.39	-5,123.95	941.35	697.52	243.83	3.861	
16,900.00	11,987.02	16,858.49	11,977.78	125.15	123.50	-90.36	-829.91	-5,223.93	940.43	691.77	248.66	3.782	
17,000.00	11,985.55	16,958.49	11,976.04	127.56	125.91	-90.34	-830.42	-5,323.91	939.51	686.02	253.49	3.706	
17,100.00	11,984.09	17,058.48	11,974.30	129.98	128.33	-90.33	-830.94	-5,423.89	938.59	680.27	258.32	3.633	
17,175.07	11,982.99	17,131.85	11,973.02	131.79	130.10	-90.31	-831.32	-5,497.24	937.91	676.00	261.91	3.581 ES, SF	

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

FLAT CREEK
RESOURCES

Anticollision Report

Company:	Flat Creek Resources, LLC	Local Co-ordinate Reference:	Well Phantom Bank 31 Fed Com No. 511H
Project:	Eddy County, New Mexico NAD27 NME	TVD Reference:	RKB=3129+25 @ 3154.00ft
Reference Site:	Phantom Bank 31 Fed Com	MD Reference:	RKB=3129+25 @ 3154.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Phantom Bank 31 Fed Com No. 511H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev2	Offset TVD Reference:	Offset Datum

Offset Design: Phantom Bank 31 Fed Com - Phantom Bank 31 Fed Com No. 709H - Original Hole - rev2													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)			
0.00	0.00	0.00	0.00	0.00	0.00	-174.42	-953.06	-93.03	957.71				
100.00	100.00	85.00	85.00	0.43	0.36	-174.42	-953.06	-93.03	957.59	956.80	0.79	1,207.552	
200.00	200.00	185.00	185.00	1.25	1.13	-174.42	-953.06	-93.03	957.59	955.21	2.38	402.110	
300.00	300.00	285.00	285.00	1.75	1.67	-174.42	-953.06	-93.03	957.59	954.17	3.42	280.022	
400.00	400.00	385.00	385.00	2.13	2.07	-174.42	-953.06	-93.03	957.59	953.38	4.21	227.597	
500.00	500.00	485.00	485.00	2.46	2.41	-174.42	-953.06	-93.03	957.59	952.72	4.87	196.501	
600.00	600.00	585.00	585.00	2.75	2.71	-174.42	-953.06	-93.03	957.59	952.13	5.46	175.293	
700.00	700.00	685.00	685.00	3.02	2.98	-174.42	-953.06	-93.03	957.59	951.59	6.00	159.626	
800.00	800.00	785.00	785.00	3.27	3.23	-174.42	-953.06	-93.03	957.59	951.09	6.49	147.436	
900.00	900.00	885.00	885.00	3.50	3.46	-174.42	-953.06	-93.03	957.59	950.63	6.96	137.596	
1,000.00	1,000.00	985.00	985.00	3.72	3.68	-174.42	-953.06	-93.03	957.59	950.19	7.40	129.432	
1,100.00	1,100.00	1,085.00	1,085.00	3.92	3.89	-174.42	-953.06	-93.03	957.59	949.77	7.82	122.515	
1,200.00	1,200.00	1,185.00	1,185.00	4.12	4.09	-174.42	-953.06	-93.03	957.59	949.37	8.22	116.554	
1,300.00	1,300.00	1,285.00	1,285.00	4.31	4.29	-174.42	-953.06	-93.03	957.59	948.99	8.60	111.347	
1,400.00	1,400.00	1,385.00	1,385.00	4.50	4.47	-174.42	-953.06	-93.03	957.59	948.62	8.97	106.745	
1,500.00	1,500.00	1,485.00	1,485.00	4.68	4.65	-174.42	-953.06	-93.03	957.59	948.26	9.33	102.639	
1,600.00	1,600.00	1,585.00	1,585.00	4.85	4.83	-174.42	-953.06	-93.03	957.59	947.91	9.68	98.945	
1,700.00	1,700.00	1,685.00	1,685.00	5.02	5.00	-174.42	-953.06	-93.03	957.59	947.57	10.02	95.598	
1,800.00	1,800.00	1,785.00	1,785.00	5.19	5.16	-174.42	-953.06	-93.03	957.59	947.24	10.35	92.546	
1,900.00	1,900.00	1,885.00	1,885.00	5.35	5.32	-174.42	-953.06	-93.03	957.59	946.92	10.67	89.748	
2,000.00	2,000.00	1,985.00	1,985.00	5.50	5.48	-174.42	-953.06	-93.03	957.59	946.60	10.99	87.169 CC, ES	
2,100.00	2,099.99	2,074.66	2,074.65	5.65	5.66	140.54	-953.55	-92.19	958.72	947.48	11.24	85.281	
2,200.00	2,199.96	2,162.37	2,162.28	5.81	6.04	140.41	-955.36	-89.05	962.46	950.91	11.55	83.333	
2,300.00	2,299.86	2,251.54	2,251.22	5.98	6.33	140.17	-958.56	-83.50	968.80	956.99	11.81	82.020	
2,400.00	2,399.73	2,351.17	2,350.51	6.17	6.46	139.93	-962.68	-76.36	976.30	964.22	12.08	80.813	
2,500.00	2,499.59	2,447.94	2,446.94	6.37	6.59	139.69	-966.71	-69.43	983.84	971.49	12.35	79.660	
2,600.00	2,599.45	2,526.00	2,524.75	6.58	6.69	139.55	-970.94	-64.73	992.74	980.14	12.61	78.751	
2,700.00	2,699.31	2,619.23	2,617.65	6.80	6.82	139.46	-977.43	-60.39	1,003.27	990.37	12.89	77.803	
2,800.00	2,799.18	2,718.65	2,716.72	7.04	7.01	139.36	-984.42	-55.82	1,013.88	1,000.63	13.25	76.532	
2,900.00	2,899.04	2,818.07	2,815.79	7.28	7.22	139.26	-991.41	-51.25	1,024.50	1,010.87	13.63	75.182	
3,000.00	2,998.90	2,917.49	2,914.86	7.53	7.45	139.17	-998.40	-46.68	1,035.12	1,021.10	14.02	73.826	
3,100.00	3,098.77	3,016.91	3,013.93	7.78	7.69	139.08	-1,005.39	-42.11	1,045.74	1,031.32	14.43	72.475	
3,200.00	3,198.63	3,116.33	3,113.00	8.05	7.94	138.99	-1,012.38	-37.55	1,056.37	1,041.52	14.85	71.139	
3,300.00	3,298.53	3,215.81	3,212.12	8.31	8.20	138.93	-1,019.37	-32.97	1,066.35	1,051.07	15.28	69.805	
3,400.00	3,398.50	3,315.38	3,311.34	8.55	8.47	138.81	-1,026.37	-28.40	1,075.02	1,059.32	15.70	68.474	
3,500.00	3,498.49	3,415.00	3,410.61	8.72	8.75	-176.38	-1,033.37	-23.82	1,082.39	1,066.31	16.08	67.294	
3,600.00	3,598.49	3,514.65	3,509.90	8.83	9.04	-176.64	-1,040.37	-19.24	1,089.14	1,072.70	16.44	66.259	
3,700.00	3,698.49	3,614.30	3,609.20	8.93	9.34	-176.90	-1,047.38	-14.66	1,095.91	1,079.11	16.80	65.242	
3,800.00	3,798.49	3,713.94	3,708.49	9.04	9.64	-177.16	-1,054.38	-10.09	1,102.70	1,085.53	17.16	64.247	
3,900.00	3,898.49	3,813.59	3,807.79	9.14	9.95	-177.42	-1,061.39	-5.51	1,109.51	1,091.98	17.53	63.274	
4,000.00	3,998.49	3,913.24	3,907.08	9.24	10.26	-177.67	-1,068.39	-0.93	1,116.34	1,098.43	17.91	62.325	
4,100.00	4,098.49	4,012.88	4,006.38	9.35	10.58	-177.92	-1,075.40	3.65	1,123.20	1,104.91	18.29	61.400	
4,200.00	4,198.49	4,112.53	4,105.67	9.45	10.90	-178.16	-1,082.40	8.23	1,130.08	1,111.40	18.68	60.498	
4,300.00	4,298.49	4,212.18	4,204.97	9.55	11.23	-178.40	-1,089.41	12.81	1,136.97	1,117.90	19.07	59.621	
4,400.00	4,398.49	4,311.82	4,304.26	9.65	11.56	-178.64	-1,096.41	17.39	1,143.89	1,124.42	19.46	58.769	
4,500.00	4,498.49	4,411.47	4,403.56	9.75	11.89	-178.88	-1,103.41	21.97	1,150.82	1,130.96	19.86	57.940	
4,600.00	4,598.49	4,511.12	4,502.85	9.86	12.23	-179.11	-1,110.42	26.54	1,157.78	1,137.52	20.26	57.135	
4,700.00	4,698.49	4,610.76	4,602.15	9.96	12.57	-179.34	-1,117.42	31.12	1,164.75	1,144.09	20.67	56.353	
4,800.00	4,798.49	4,710.41	4,701.44	10.06	12.91	-179.57	-1,124.43	35.70	1,171.75	1,150.67	21.08	55.595	
4,900.00	4,898.49	4,810.06	4,800.74	10.16	13.25	-179.80	-1,131.43	40.28	1,178.76	1,157.27	21.49	54.858	
5,000.00	4,998.49	4,909.70	4,900.03	10.26	13.60	179.98	-1,138.44	44.86	1,185.79	1,163.89	21.90	54.140	
5,100.00	5,098.47	5,009.21	4,999.19	10.51	13.95	-114.42	-1,145.43	49.43	1,193.54	1,171.05	22.49	53.075	

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



FLAT CREEK
RESOURCES

Anticollision Report

Company:	Flat Creek Resources, LLC	Local Co-ordinate Reference:	Well Phantom Bank 31 Fed Com No. 511H
Project:	Eddy County, New Mexico NAD27 NME	TVD Reference:	RKB=3129+25 @ 3154.00ft
Reference Site:	Phantom Bank 31 Fed Com	MD Reference:	RKB=3129+25 @ 3154.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Phantom Bank 31 Fed Com No. 511H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev2	Offset TVD Reference:	Offset Datum

Offset Design: Phantom Bank 31 Fed Com - Phantom Bank 31 Fed Com No. 709H - Original Hole - rev2											Offset Site Error:	0.00 ft
Survey Program: 0-MWD											Offset Well Error:	0.00 ft
Rule Assigned:											Warning	
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
5,200.00	5,198.33	5,108.35	5,097.98	10.82	14.29	-114.69	-1,152.40	53.99	1,202.77	1,179.56	23.21	51.825
5,300.00	5,297.97	5,207.03	5,196.31	10.84	14.64	-115.12	-1,159.34	58.52	1,213.50	1,189.85	23.65	51.310
5,400.00	5,397.52	5,325.87	5,314.77	10.89	15.05	-115.83	-1,167.24	63.69	1,224.44	1,200.29	24.16	50.684
5,500.00	5,497.07	5,482.78	5,471.55	10.96	15.67	-116.60	-1,172.14	66.89	1,231.84	1,206.99	24.85	49.566
5,600.00	5,596.63	5,592.86	5,581.63	11.04	15.78	-117.03	-1,172.26	66.97	1,236.19	1,211.08	25.11	49.234
5,700.00	5,696.18	5,692.41	5,681.18	11.13	15.82	-117.42	-1,172.26	66.97	1,240.52	1,215.20	25.32	48.989
5,800.00	5,795.74	5,791.97	5,780.74	11.24	15.86	-117.80	-1,172.26	66.97	1,244.91	1,219.37	25.54	48.739
5,900.00	5,895.29	5,891.52	5,880.29	11.36	15.91	-118.18	-1,172.26	66.97	1,249.36	1,223.59	25.77	48.486
6,000.00	5,994.84	5,991.07	5,979.84	11.49	15.95	-118.56	-1,172.26	66.97	1,253.86	1,227.86	26.00	48.232
6,100.00	6,094.40	6,090.63	6,079.40	11.63	16.00	-118.94	-1,172.26	66.97	1,258.41	1,232.18	26.23	47.977
6,200.00	6,193.95	6,190.18	6,178.95	11.78	16.04	-119.31	-1,172.26	66.97	1,263.02	1,236.55	26.47	47.721
6,300.00	6,293.50	6,289.73	6,278.50	11.94	16.09	-119.68	-1,172.26	66.97	1,267.68	1,240.97	26.71	47.464
6,400.00	6,393.06	6,389.29	6,378.06	12.11	16.13	-120.05	-1,172.26	66.97	1,272.39	1,245.44	26.95	47.206
6,500.00	6,492.61	6,488.84	6,477.61	12.30	16.18	-120.41	-1,172.26	66.97	1,277.16	1,249.96	27.20	46.948
6,600.00	6,592.17	6,588.40	6,577.17	12.49	16.22	-120.78	-1,172.26	66.97	1,281.98	1,254.52	27.46	46.689
6,700.00	6,691.72	6,687.95	6,676.72	12.69	16.27	-121.14	-1,172.26	66.97	1,286.85	1,259.13	27.72	46.431
6,800.00	6,791.27	6,787.50	6,776.27	12.90	16.32	-121.49	-1,172.26	66.97	1,291.77	1,263.79	27.98	46.172
6,900.00	6,890.83	6,887.06	6,875.83	13.12	16.36	-121.85	-1,172.26	66.97	1,296.74	1,268.50	28.24	45.913
7,000.00	6,990.38	6,986.61	6,975.38	13.35	16.41	-122.20	-1,172.26	66.97	1,301.76	1,273.25	28.51	45.655
7,100.00	7,089.93	7,086.17	7,074.93	13.58	16.46	-122.55	-1,172.26	66.97	1,306.83	1,278.04	28.79	45.397
7,200.00	7,189.49	7,185.72	7,174.49	13.83	16.50	-122.89	-1,172.26	66.97	1,311.94	1,282.88	29.06	45.140
7,300.00	7,289.10	7,285.33	7,274.10	14.05	16.55	-123.26	-1,172.26	66.97	1,316.77	1,287.46	29.31	44.923
7,400.00	7,388.93	7,385.16	7,373.93	14.35	16.60	-123.52	-1,172.26	66.97	1,319.87	1,290.28	29.59	44.606
7,500.00	7,488.91	7,485.14	7,473.91	14.66	16.65	-123.61	-1,172.26	66.97	1,321.04	1,291.20	29.84	44.264
7,600.00	7,588.91	7,585.14	7,573.91	14.72	16.70	-123.62	-1,172.26	66.97	1,321.06	1,291.10	29.96	44.093
7,700.00	7,688.91	7,685.14	7,673.91	14.80	16.75	-123.62	-1,172.26	66.97	1,321.06	1,290.97	30.09	43.905
7,800.00	7,788.91	7,785.14	7,773.91	14.87	16.80	-123.62	-1,172.26	66.97	1,321.06	1,290.84	30.22	43.715
7,900.00	7,888.91	7,885.14	7,873.91	14.95	16.85	-123.62	-1,172.26	66.97	1,321.06	1,290.71	30.35	43.527
8,000.00	7,988.91	7,985.14	7,973.91	15.02	16.90	-123.62	-1,172.26	66.97	1,321.06	1,290.58	30.48	43.340
8,100.00	8,088.91	8,085.14	8,073.91	15.09	16.95	-123.62	-1,172.26	66.97	1,321.06	1,290.44	30.61	43.155
8,200.00	8,188.91	8,185.14	8,173.91	15.17	17.00	-123.62	-1,172.26	66.97	1,321.06	1,290.31	30.74	42.970
8,300.00	8,288.91	8,285.14	8,273.91	15.24	17.05	-123.62	-1,172.26	66.97	1,321.06	1,290.18	30.88	42.787
8,400.00	8,388.91	8,385.14	8,373.91	15.32	17.10	-123.62	-1,172.26	66.97	1,321.06	1,290.05	31.01	42.605
8,500.00	8,488.91	8,485.14	8,473.91	15.39	17.15	-123.62	-1,172.26	66.97	1,321.06	1,289.92	31.14	42.424
8,600.00	8,588.91	8,585.14	8,573.91	15.47	17.20	-123.62	-1,172.26	66.97	1,321.06	1,289.78	31.27	42.244
8,700.00	8,688.91	8,685.14	8,673.91	15.54	17.25	-123.62	-1,172.26	66.97	1,321.06	1,289.65	31.40	42.066
8,800.00	8,788.91	8,785.14	8,773.91	15.61	17.30	-123.62	-1,172.26	66.97	1,321.06	1,289.52	31.54	41.888
8,900.00	8,888.91	8,885.14	8,873.91	15.69	17.36	-123.62	-1,172.26	66.97	1,321.06	1,289.39	31.67	41.712
9,000.00	8,988.91	8,985.14	8,973.91	15.76	17.41	-123.62	-1,172.26	66.97	1,321.06	1,289.25	31.80	41.537
9,100.00	9,088.91	9,085.14	9,073.91	15.84	17.46	-123.62	-1,172.26	66.97	1,321.06	1,289.12	31.94	41.363
9,200.00	9,188.91	9,185.14	9,173.91	15.91	17.51	-123.62	-1,172.26	66.97	1,321.06	1,288.98	32.07	41.190
9,300.00	9,288.91	9,285.14	9,273.91	15.99	17.57	-123.62	-1,172.26	66.97	1,321.06	1,288.85	32.21	41.018
9,400.00	9,388.91	9,385.14	9,373.91	16.06	17.62	-123.62	-1,172.26	66.97	1,321.06	1,288.72	32.34	40.848
9,500.00	9,488.91	9,485.14	9,473.91	16.14	17.67	-123.62	-1,172.26	66.97	1,321.06	1,288.58	32.48	40.678
9,600.00	9,588.91	9,585.14	9,573.91	16.21	17.73	-123.62	-1,172.26	66.97	1,321.06	1,288.45	32.61	40.510
9,700.00	9,688.91	9,685.14	9,673.91	16.29	17.78	-123.62	-1,172.26	66.97	1,321.06	1,288.31	32.75	40.342
9,800.00	9,788.91	9,785.14	9,773.91	16.37	17.83	-123.62	-1,172.26	66.97	1,321.06	1,288.17	32.88	40.176
9,900.00	9,888.91	9,885.14	9,873.91	16.44	17.89	-123.62	-1,172.26	66.97	1,321.06	1,288.04	33.02	40.011
10,000.00	9,988.91	9,985.14	9,973.91	16.52	17.94	-123.62	-1,172.26	66.97	1,321.06	1,287.90	33.15	39.847
10,100.00	10,088.91	10,085.14	10,073.91	16.59	18.00	-123.62	-1,172.26	66.97	1,321.06	1,287.77	33.29	39.684
10,200.00	10,188.91	10,185.14	10,173.91	16.67	18.05	-123.62	-1,172.26	66.97	1,321.06	1,287.63	33.43	39.522
10,300.00	10,288.91	10,285.14	10,273.91	16.74	18.11	-123.62	-1,172.26	66.97	1,321.06	1,287.49	33.56	39.361

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



FLAT CREEK
RESOURCES

Anticollision Report

Company:	Flat Creek Resources, LLC	Local Co-ordinate Reference:	Well Phantom Bank 31 Fed Com No. 511H
Project:	Eddy County, New Mexico NAD27 NME	TVD Reference:	RKB=3129+25 @ 3154.00ft
Reference Site:	Phantom Bank 31 Fed Com	MD Reference:	RKB=3129+25 @ 3154.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Phantom Bank 31 Fed Com No. 511H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev2	Offset TVD Reference:	Offset Datum

Offset Design:		Phantom Bank 31 Fed Com - Phantom Bank 31 Fed Com No. 709H - Original Hole - rev2											Offset Site Error:		0.00 ft		
Survey Program:		0-MWD						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					
10,400.00	10,388.91	10,385.14	10,373.91	16.82	18.16	170.62	-1,172.26	66.97	1,321.06	1,287.36	33.70	39.201					
10,500.00	10,488.91	10,485.14	10,473.91	16.89	18.22	170.62	-1,172.26	66.97	1,321.06	1,287.22	33.84	39.042					
10,600.00	10,588.91	10,585.14	10,573.91	16.97	18.27	170.62	-1,172.26	66.97	1,321.06	1,287.08	33.97	38.884					
10,700.00	10,688.91	10,685.14	10,673.91	17.05	18.33	170.62	-1,172.26	66.97	1,321.06	1,286.94	34.11	38.728					
10,800.00	10,788.91	10,785.14	10,773.91	17.12	18.38	170.62	-1,172.26	66.97	1,321.06	1,286.81	34.25	38.572					
10,900.00	10,888.91	10,885.14	10,873.91	17.20	18.44	170.62	-1,172.26	66.97	1,321.06	1,286.67	34.39	38.417					
11,000.00	10,988.91	10,985.14	10,973.91	17.27	18.50	170.62	-1,172.26	66.97	1,321.06	1,286.53	34.53	38.264					
11,100.00	11,088.91	11,085.14	11,073.91	17.35	18.55	170.62	-1,172.26	66.97	1,321.06	1,286.39	34.66	38.111					
11,200.00	11,188.91	11,185.14	11,173.91	17.43	18.61	170.62	-1,172.26	66.97	1,321.06	1,286.25	34.80	37.959					
11,300.00	11,288.91	11,297.05	11,285.80	17.50	18.63	170.66	-1,172.26	66.03	1,320.96	1,286.05	34.91	37.834					
11,400.00	11,388.91	11,447.71	11,433.36	17.58	18.61	171.88	-1,172.41	37.84	1,318.12	1,283.26	34.86	37.817					
11,500.00	11,488.90	11,576.44	11,549.98	17.65	18.59	-102.06	-1,172.69	-16.01	1,312.76	1,278.06	34.70	37.834					
11,600.00	11,588.21	11,685.60	11,637.40	17.97	18.62	-99.97	-1,173.03	-81.11	1,309.23	1,274.62	34.61	37.830					
11,640.52	11,627.67	11,726.33	11,666.61	18.16	18.66	-99.08	-1,173.18	-109.49	1,308.90	1,274.26	34.64	37.784					
11,700.00	11,684.17	11,783.14	11,703.82	18.46	18.73	-97.72	-1,173.41	-152.38	1,309.60	1,274.85	34.75	37.688					
11,800.00	11,773.87	11,872.17	11,753.12	18.98	18.94	-95.32	-1,173.79	-226.41	1,313.85	1,278.64	35.21	37.313					
11,900.00	11,854.58	11,954.94	11,788.16	19.49	19.29	-92.79	-1,174.18	-301.31	1,321.64	1,285.58	36.06	36.653					
12,000.00	11,923.84	12,033.04	11,811.00	19.96	19.79	-90.18	-1,174.57	-375.94	1,332.43	1,295.09	37.34	35.687					
12,100.00	11,979.56	12,107.66	11,823.17	20.39	20.45	-87.40	-1,174.96	-449.50	1,345.52	1,306.50	39.01	34.488					
12,200.00	12,020.29	12,181.46	11,825.74	20.88	21.25	-84.07	-1,175.34	-523.21	1,357.78	1,316.70	41.08	33.050					
12,300.00	12,044.96	12,277.69	11,824.07	21.68	22.52	-81.72	-1,175.85	-619.42	1,365.97	1,322.24	43.73	31.236					
12,400.00	12,052.83	12,377.09	11,822.33	22.89	24.00	-80.94	-1,176.37	-718.81	1,368.46	1,321.75	46.70	29.300					
12,500.00	12,051.38	12,477.09	11,820.59	24.38	25.66	-80.93	-1,176.89	-818.79	1,367.61	1,317.67	49.94	27.385					
12,600.00	12,049.92	12,577.08	11,818.84	26.06	27.44	-80.91	-1,177.41	-918.77	1,366.75	1,313.35	53.40	25.594					
12,700.00	12,048.46	12,677.08	11,817.10	27.87	29.32	-80.89	-1,177.93	-1,018.75	1,365.90	1,308.84	57.06	23.936					
12,800.00	12,046.99	12,777.07	11,815.35	29.77	31.28	-80.87	-1,178.46	-1,118.72	1,365.05	1,304.16	60.89	22.419					
12,900.00	12,045.53	12,877.07	11,813.61	31.75	33.31	-80.86	-1,178.98	-1,218.70	1,364.19	1,299.35	64.84	21.038					
13,000.00	12,044.07	12,977.07	11,811.86	33.80	35.40	-80.84	-1,179.50	-1,318.68	1,363.34	1,294.43	68.91	19.784					
13,100.00	12,042.60	13,077.06	11,810.12	35.89	37.52	-80.82	-1,180.02	-1,418.66	1,362.48	1,289.41	73.07	18.646					
13,200.00	12,041.14	13,177.06	11,808.37	38.03	39.69	-80.80	-1,180.55	-1,518.64	1,361.63	1,284.32	77.31	17.613					
13,300.00	12,039.68	13,277.05	11,806.63	40.20	41.89	-80.79	-1,181.07	-1,618.62	1,360.78	1,279.17	81.61	16.674					
13,400.00	12,038.22	13,377.05	11,804.89	42.40	44.11	-80.77	-1,181.59	-1,718.60	1,359.92	1,273.96	85.97	15.819					
13,500.00	12,036.75	13,477.04	11,803.14	44.63	46.36	-80.75	-1,182.11	-1,818.58	1,359.07	1,268.70	90.37	15.039					
13,600.00	12,035.29	13,577.04	11,801.40	46.87	48.62	-80.73	-1,182.64	-1,918.56	1,358.22	1,263.41	94.81	14.325					
13,700.00	12,033.83	13,677.03	11,799.65	49.14	50.90	-80.71	-1,183.16	-2,018.53	1,357.36	1,258.07	99.29	13.671					
13,800.00	12,032.36	13,777.03	11,797.91	51.42	53.20	-80.70	-1,183.68	-2,118.51	1,356.51	1,252.71	103.80	13.069					
13,900.00	12,030.90	13,877.02	11,796.16	53.72	55.51	-80.68	-1,184.20	-2,218.49	1,355.66	1,247.33	108.33	12.514					
14,000.00	12,029.44	13,977.02	11,794.42	56.02	57.83	-80.66	-1,184.73	-2,318.47	1,354.81	1,241.92	112.89	12.001					
14,100.00	12,027.98	14,077.02	11,792.67	58.34	60.16	-80.64	-1,185.25	-2,418.45	1,353.95	1,236.49	117.47	11.526					
14,200.00	12,026.51	14,177.01	11,790.93	60.67	62.50	-80.62	-1,185.77	-2,518.43	1,353.10	1,231.04	122.06	11.085					
14,300.00	12,025.05	14,277.01	11,789.18	63.01	64.84	-80.61	-1,186.29	-2,618.41	1,352.25	1,225.57	126.68	10.675					
14,400.00	12,023.59	14,377.00	11,787.44	65.35	67.20	-80.59	-1,186.82	-2,718.39	1,351.40	1,220.09	131.30	10.292					
14,500.00	12,022.12	14,477.00	11,785.69	67.70	69.55	-80.57	-1,187.34	-2,818.37	1,350.54	1,214.60	135.94	9.935					
14,600.00	12,020.66	14,576.99	11,783.95	70.06	71.92	-80.55	-1,187.86	-2,918.34	1,349.69	1,209.10	140.59	9.600					
14,700.00	12,019.20	14,676.99	11,782.20	72.42	74.29	-80.53	-1,188.38	-3,018.32	1,348.84	1,203.59	145.25	9.286					
14,800.00	12,017.74	14,776.98	11,780.46	74.79	76.66	-80.51	-1,188.91	-3,118.30	1,347.99	1,198.07	149.92	8.991					
14,900.00	12,016.27	14,876.98	11,778.72	77.16	79.04	-80.50	-1,189.43	-3,218.28	1,347.14	1,192.54	154.60	8.714					
15,000.00	12,014.81	14,976.97	11,776.97	79.54	81.42	-80.48	-1,189.95	-3,318.26	1,346.29	1,187.00	159.29	8.452					
15,100.00	12,013.35	15,076.97	11,775.23	81.92	83.81	-80.46	-1,190.47	-3,418.24	1,345.44	1,181.46	163.98	8.205					
15,200.00	12,011.88	15,176.97	11,773.48	84.30	86.20	-80.44	-1,191.00	-3,518.22	1,344.58	1,175.91	168.68	7.971					
15,300.00	12,010.42	15,276.96	11,771.74	86.69	88.59	-80.42	-1,191.52	-3,618.20	1,343.73	1,170.35	173.38	7.750					
15,400.00	12,008.96	15,376.96	11,769.99	89.07	90.98	-80.41	-1,192.04	-3,718.18	1,342.88	1,164.79	178.09	7.540					

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

FLAT CREEK
RESOURCES

Anticollision Report

Company:	Flat Creek Resources, LLC	Local Co-ordinate Reference:	Well Phantom Bank 31 Fed Com No. 511H
Project:	Eddy County, New Mexico NAD27 NME	TVD Reference:	RKB=3129+25 @ 3154.00ft
Reference Site:	Phantom Bank 31 Fed Com	MD Reference:	RKB=3129+25 @ 3154.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Phantom Bank 31 Fed Com No. 511H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev2	Offset TVD Reference:	Offset Datum

Offset Design: Phantom Bank 31 Fed Com - Phantom Bank 31 Fed Com No. 709H - Original Hole - rev2													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)				
15,500.00	12,007.50	15,476.95	11,768.25	91.47	93.38	-80.39	-1,192.56	-3,818.15	1,342.03	1,159.22	182.81	7.341		
15,600.00	12,006.03	15,576.95	11,766.50	93.86	95.78	-80.37	-1,193.09	-3,918.13	1,341.18	1,153.66	187.53	7.152		
15,700.00	12,004.57	15,676.94	11,764.76	96.26	98.18	-80.35	-1,193.61	-4,018.11	1,340.33	1,148.08	192.25	6.972		
15,800.00	12,003.11	15,776.94	11,763.01	98.66	100.58	-80.33	-1,194.13	-4,118.09	1,339.48	1,142.50	196.98	6.800		
15,900.00	12,001.64	15,876.93	11,761.27	101.06	102.99	-80.31	-1,194.65	-4,218.07	1,338.63	1,136.92	201.71	6.637		
16,000.00	12,000.18	15,976.93	11,759.52	103.46	105.40	-80.29	-1,195.18	-4,318.05	1,337.78	1,131.34	206.44	6.480		
16,100.00	11,998.72	16,076.92	11,757.78	105.86	107.80	-80.28	-1,195.70	-4,418.03	1,336.93	1,125.75	211.18	6.331		
16,200.00	11,997.26	16,176.92	11,756.04	108.27	110.21	-80.26	-1,196.22	-4,518.01	1,336.08	1,120.17	215.92	6.188		
16,300.00	11,995.79	16,276.92	11,754.29	110.68	112.62	-80.24	-1,196.74	-4,617.99	1,335.23	1,114.58	220.66	6.051		
16,400.00	11,994.33	16,376.91	11,752.55	113.09	115.04	-80.22	-1,197.27	-4,717.96	1,334.38	1,108.98	225.40	5.920		
16,500.00	11,992.87	16,476.91	11,750.80	115.50	117.45	-80.20	-1,197.79	-4,817.94	1,333.53	1,103.39	230.15	5.794		
16,600.00	11,991.41	16,576.90	11,749.06	117.91	119.86	-80.18	-1,198.31	-4,917.92	1,332.69	1,097.79	234.89	5.674		
16,700.00	11,989.94	16,676.90	11,747.31	120.32	122.28	-80.16	-1,198.83	-5,017.90	1,331.84	1,092.19	239.64	5.558		
16,800.00	11,988.48	16,776.89	11,745.57	122.73	124.70	-80.15	-1,199.36	-5,117.88	1,330.99	1,086.59	244.39	5.446		
16,900.00	11,987.02	16,876.89	11,743.82	125.15	127.11	-80.13	-1,199.88	-5,217.86	1,330.14	1,080.99	249.15	5.339		
17,000.00	11,985.55	16,976.88	11,742.08	127.56	129.53	-80.11	-1,200.40	-5,317.84	1,329.29	1,075.39	253.90	5.235		
17,100.00	11,984.09	17,076.88	11,740.33	129.98	131.95	-80.09	-1,200.92	-5,417.82	1,328.44	1,069.79	258.65	5.136		
17,175.07	11,982.99	17,151.95	11,739.02	131.79	133.77	-80.08	-1,201.32	-5,492.87	1,327.80	1,065.58	262.22	5.064 SF		

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



FLAT CREEK
RESOURCES

Anticollision Report

Company:	Flat Creek Resources, LLC	Local Co-ordinate Reference:	Well Phantom Bank 31 Fed Com No. 511H
Project:	Eddy County, New Mexico NAD27 NME	TVD Reference:	RKB=3129+25 @ 3154.00ft
Reference Site:	Phantom Bank 31 Fed Com	MD Reference:	RKB=3129+25 @ 3154.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Phantom Bank 31 Fed Com No. 511H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DB_Decv0422v16
Reference Design:	rev2	Offset TVD Reference:	Offset Datum

Reference Depths are relative to RKB=3129+25 @ 3154.00ft

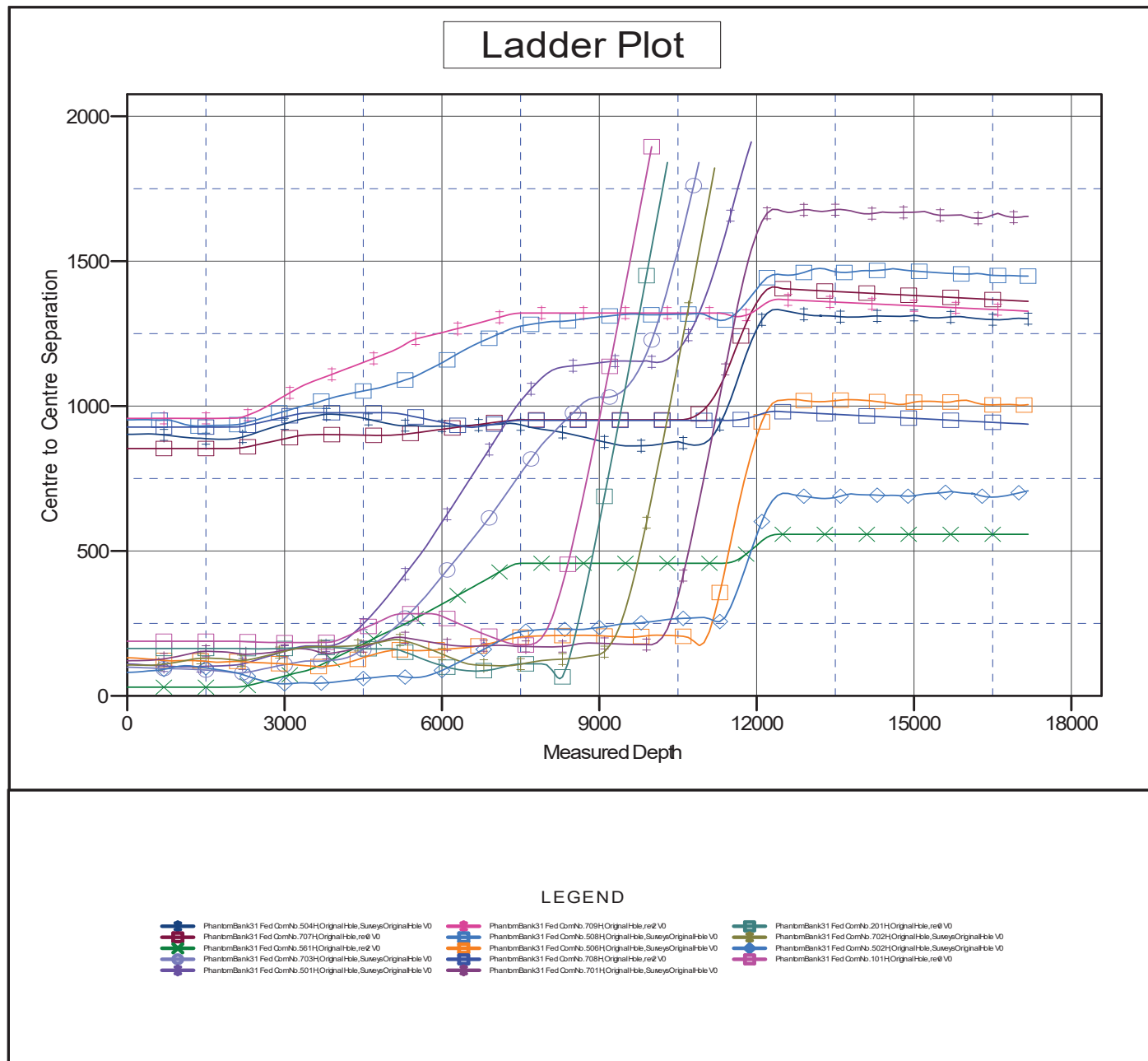
Offset Depths are relative to Offset Datum

Central Meridian is -104.33333333

Coordinates are relative to: Phantom Bank 31 Fed Com No. 511H

Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 300

Grid Convergence at Surface is: 0.28°



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

FLAT CREEK
RESOURCES

Anticollision Report

Company:	Flat Creek Resources, LLC	Local Co-ordinate Reference:	Well Phantom Bank 31 Fed Com No. 511H
Project:	Eddy County, New Mexico NAD27 NME	TVD Reference:	RKB=3129+25 @ 3154.00ft
Reference Site:	Phantom Bank 31 Fed Com	MD Reference:	RKB=3129+25 @ 3154.00ft
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Offset Depths are relative to Offset Datum

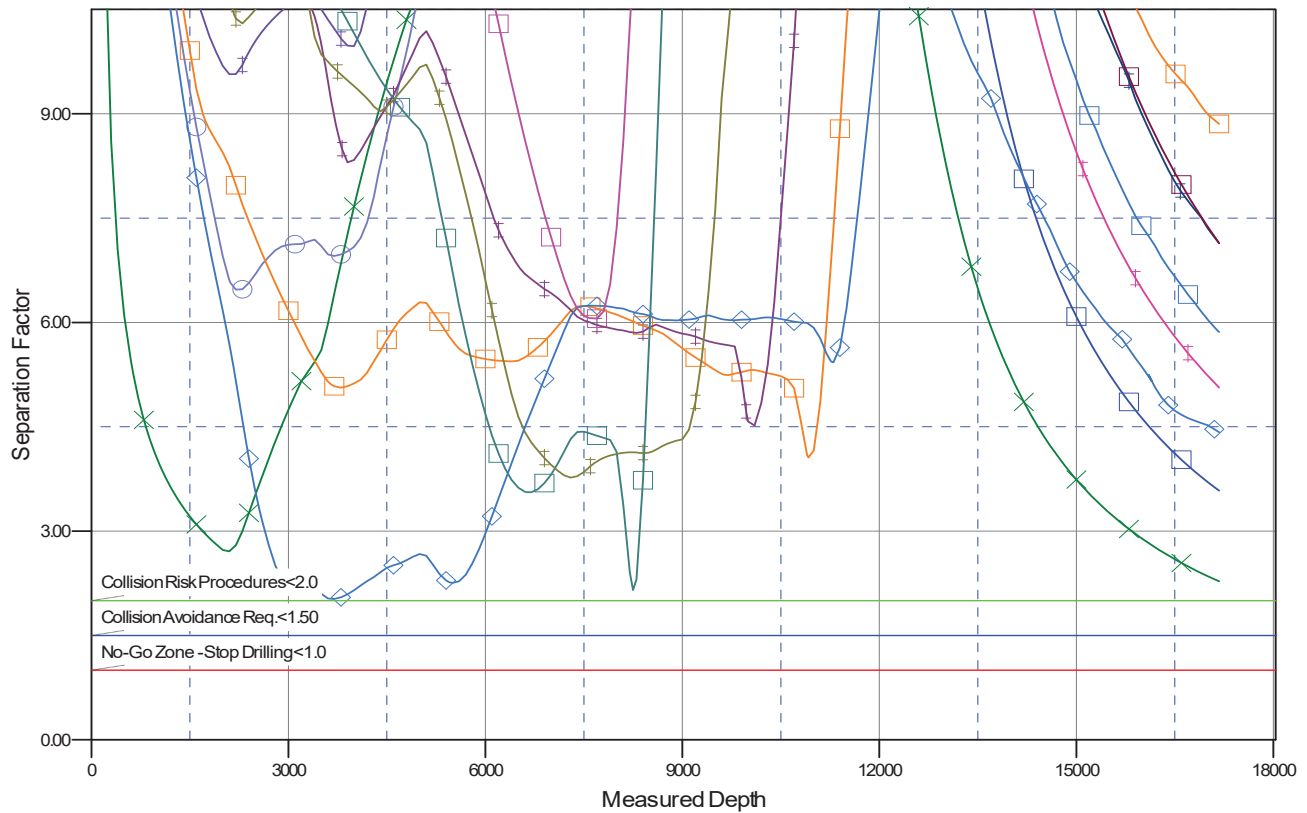
Central Meridian is -104.33333333

Coordinates are relative to: Phantom Bank 31 Fed Com No. 511H

Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 300

Grid Convergence at Surface is: 0.28°

Separation Factor Plot



LEGEND

PhantomBank31 Fed ComNo. 504HOriginalHole, SuseysOriginalHole V0	PhantomBank31 Fed ComNo. 709HOriginalHole, rev2 V0	PhantomBank31 Fed ComNo. 201HOriginalHole, rev0 V0
PhantomBank31 Fed ComNo. 707HOriginalHole, rev0 V0	PhantomBank31 Fed ComNo. 508HOriginalHole, SuseysOriginalHole V0	PhantomBank31 Fed ComNo. 702HOriginalHole, SuseysOriginalHole V0
PhantomBank31 Fed ComNo. 561HOriginalHole, rev2 V0	PhantomBank31 Fed ComNo. 506HOriginalHole, SuseysOriginalHole V0	PhantomBank31 Fed ComNo. 502HOriginalHole, SuseysOriginalHole V0
PhantomBank31 Fed ComNo. 703HOriginalHole, SuseysOriginalHole V0	PhantomBank31 Fed ComNo. 708HOriginalHole, rev2 V0	PhantomBank31 Fed ComNo. 101HOriginalHole, rev0 V0
PhantomBank31 Fed ComNo. 501HOriginalHole, SuseysOriginalHole V0	PhantomBank31 Fed ComNo. 701HOriginalHole, SuseysOriginalHole V0	

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

Well Name: PHANTOM BANK 31 FED	Well Location: T26S / R31E / SEC 32 / NWNW / 32.00474 / -103.807788	County or Parish/State: EDDY / NM
Well Number: 511H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM138868	Unit or CA Name:	Unit or CA Number:
US Well Number: 3001553704	Operator: FLAT CREEK RESOURCES LLC	

Notice of Intent

Sundry ID: 2748088

Type of Submission: Notice of Intent	Type of Action: APD Change
Date Sundry Submitted: 08/25/2023	Time Sundry Submitted: 04:09
Date proposed operation will begin: 10/01/2023	

Procedure Description: Request to move SHL from 520' FNL & 350' FWL, Sec 32 26S 31E to 681' FNL & 400' FWL, Sec 32 26S 31E. Request to move BHL from 1050' FNL & 30' FWL, Sec 31 26S 31E to 500' FNL & 230' FWL, Sec 31 26S 31E. TVD has changed from 9631' to 11983'. MD has changed from 15162' to 17174'. Well type has changed from oil to gas. Field and pool have changed from Wildcat; Bone Spring to Purple Sage; Wolfcamp (Gas) Pad has been built. No change in pad footprint. Revised C102 and drilling documents attached.

NOI Attachments

Procedure Description

Phantom_511_APD_Docs_20240220154920.pdf

Well Name: PHANTOM BANK 31 FED	Well Location: T26S / R31E / SEC 32 / NWNW / 32.00474 / -103.807788	County or Parish/State: EDDY / NM
Well Number: 511H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM138868	Unit or CA Name:	Unit or CA Number:
US Well Number: 3001553704	Operator: FLAT CREEK RESOURCES LLC	

Conditions of Approval

Additional

32_26_31_D_Sundry_ID_2748088_Phantom_Bank_31_Fed_Com_511H_Eddy_NMNM138868_FLAT_CREEK_RESOU
RCES_LLC_13_22d_12_23_2022_LV_20240410132257.pdf

Phantom_Bank_31_Fed_511H_Dr_COA_20240410132240.pdf

Operator

I certify that the foregoing is true and correct. Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction. Electronic submission of Sundry Notices through this system satisfies regulations requiring a

Operator Electronic Signature: BRIAN WOOD

Signed on: FEB 20, 2024 03:51 PM

Name: FLAT CREEK RESOURCES LLC

Title: Permitting Agent

Street Address: 37 VERANO LOOP

City: SANTA FE

State: NM

Phone: (505) 466-8120

Email address: AFMSS@PERMITSWEST.COM

Field

Representative Name:

Street Address:

City:

State:

Zip:

Phone:

Email address:

BLM Point of Contact

BLM POC Name: CHRISTOPHER WALLS

BLM POC Title: Petroleum Engineer

BLM POC Phone: 5752342234

BLM POC Email Address: cwalls@blm.gov

Disposition: Approved

Disposition Date: 05/02/2024

Signature: Chris Walls

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
<https://www.emnrd.nm.gov/ocd/contact-us>

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

CONDITIONS

Action 340609

CONDITIONS

Operator: Flat Creek Resources, LLC 777 Main St. Fort Worth, TX 76102	OGRID: 374034
	Action Number: 340609
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
ward.rikala	If cement is not circulated to surface during cementing operations, a Cement Bond Log (CBL) is required.	4/29/2025
ward.rikala	Cement is required to circulate on both surface and intermediate1 strings of casing.	4/29/2025
ward.rikala	Any previous COA's not addressed within the updated COA's still apply.	4/29/2025