

Well Name: JAWBONE FED COM LW	Well Location: T25S / R26E / SEC 2 / SWSW /	County or Parish/State:
Well Number: 15H	Type of Well: CONVENTIONAL GAS WELL	Allottee or Tribe Name:
Lease Number: NMNM0441951	Unit or CA Name:	Unit or CA Number:
US Well Number: 3001549664	Well Status: Approved Application for Permit to Drill	Operator: FLAT CREEK RESOURCES LLC

Notice of Intent

Sundry ID: 2759785

Type of Submission: Notice of Intent	Type of Action: APD Change
Date Sundry Submitted: 11/05/2023	Time Sundry Submitted: 06:28
Date proposed operation will begin: 12/01/2023	

Procedure Description: Well type has changed from gas to oil. Zone has changed from Wolfcamp to Bone Spring. TVD has changed from 9525' to 7705'. MD has changed from 19701' to 18078' BHL was at 330' FNL and 2315' FWL 35-24s-26e. BHL has now moved 1658' NW to 50' FNL & 680' FWL 35-24s-26e. No change in SHL. No change in pad footprint. Revised drilling documents attached.

NOI Attachments

Procedure Description

- 5.5in_Casing_Spec_20231105062635.pdf
- Jawbone_LW_15H_Casing_Design_Assumptions_20231105062621.pdf
- Jawbone_LW_15H_AntiCollision_Report_20231105062607.pdf
- Jawbone_LW_15H_Horiztonal_Plan_20231105062553.pdf
- Jawbone_LW_15H_C102_20231105062539.pdf
- Jawbone_LW_15H_Drill_Plan_20231105062524.pdf

Well Name: JAWBONE FED COM LW	Well Location: T25S / R26E / SEC 2 / SWSW /	County or Parish/State:
Well Number: 15H	Type of Well: CONVENTIONAL GAS WELL	Allottee or Tribe Name:
Lease Number: NMNM0441951	Unit or CA Name:	Unit or CA Number:
US Well Number: 3001549664	Well Status: Approved Application for Permit to Drill	Operator: FLAT CREEK RESOURCES LLC

Conditions of Approval

Additional

2_25_26_M_Sundry_ID_2759785_Jawbone_Federal_Com_LW_15H_Eddy_NM0441951_FLAT_CREEK_RESOURCES_LLC_13_22fa_11_21_2023_LV_20231215103351.pdf

Jawbone_Fed_Com_LW_15H_Dr_COA_20231215103352.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: NOV 05, 2023 06:26 AM

Name: FLAT CREEK RESOURCES LLC

Title: President

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: 12/29/2023

Signature: Chris Walls

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

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

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

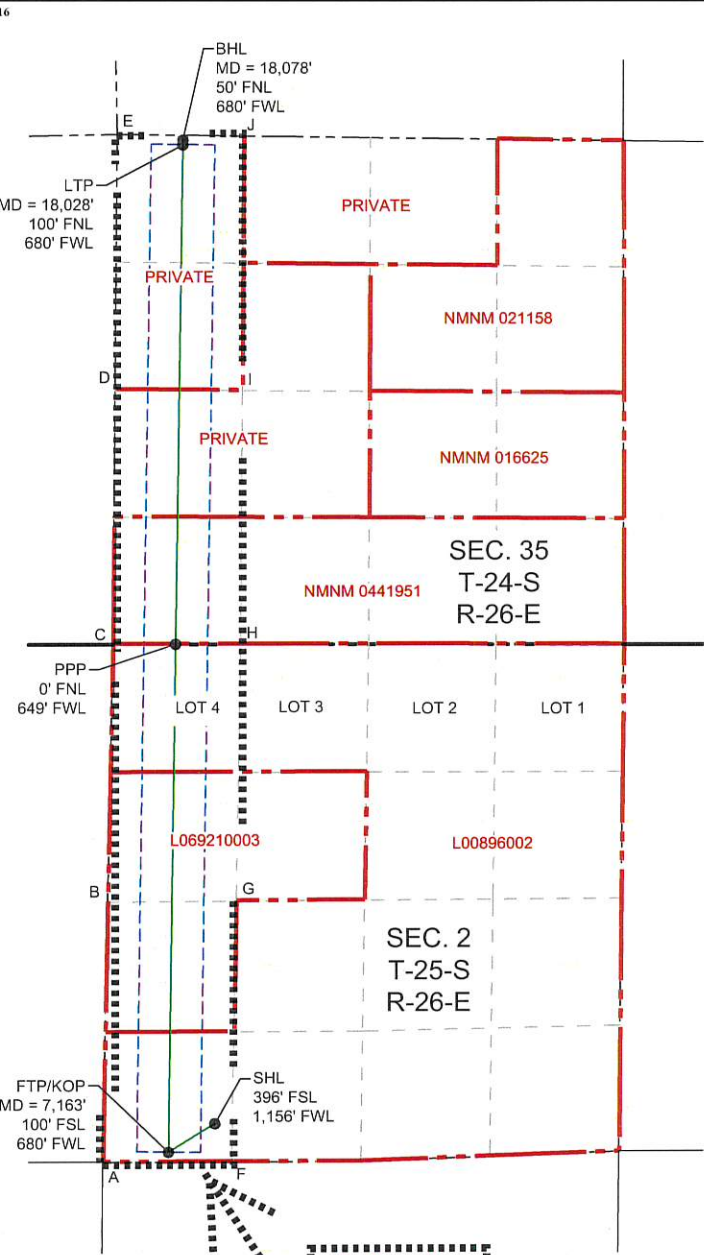
¹ API Number 30-015- 49664	² Pool Code 97494	³ Pool Name COTTONWOOD DRAW; BONE SPRING (O)
⁴ Property Code	⁵ Property Name JAWBONE FEDERAL COM LW	⁶ Well Number 15H
⁷ OGRID No. 374034	⁸ Operator Name FLAT CREEK RESOURCES, LLC	⁹ Elevation 3,381'

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
M	2	25 S	26 E		396	SOUTH	1,156	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
D	35	24 S	26 E		50	NORTH	680	WEST	EDDY

¹² Dedicated Acres 319.96	¹³ Joint or Infill	¹⁴ Consolidation Code C	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.



LOT ACREAGE TABLE	
SECTION 2	
T-25-S, R-26-E	
LOT 1 =	40.20 ACRES
LOT 2 =	40.12 ACRES
LOT 3 =	40.04 ACRES
LOT 4 =	39.96 ACRES

COORDINATE TABLE			
SHL (NAD 83 NME)		SHL (NAD 27 NME)	
Y =	419,276.0 N	Y =	419,218.6 N
X =	561,297.7 E	X =	520,115.6 E
LAT. =	32.152652 °N	LAT. =	32.152532 °N
LONG. =	104.268836 °W	LONG. =	104.268335 °W
FTP/KOP (NAD 83 NME)		FTP/KOP (NAD 27 NME)	
Y =	418,978.9 N	Y =	418,921.5 N
X =	560,815.8 E	X =	519,633.6 E
LAT. =	32.151836 °N	LAT. =	32.151716 °N
LONG. =	104.270394 °W	LONG. =	104.269893 °W
PPP (NAD 83 NME)		PPP (NAD 27 NME)	
Y =	424,292.8 N	Y =	424,235.3 N
X =	560,891.0 E	X =	519,708.9 E
LAT. =	32.166443 °N	LAT. =	32.166324 °N
LONG. =	104.270141 °W	LONG. =	104.269640 °W
LTP (NAD 83 NME)		LTP (NAD 27 NME)	
Y =	429,515.7 N	Y =	429,458.1 N
X =	560,964.9 E	X =	519,783.0 E
LAT. =	32.180800 °N	LAT. =	32.180681 °N
LONG. =	104.269892 °W	LONG. =	104.269390 °W
BHL (NAD 83 NME)		BHL (NAD 27 NME)	
Y =	429,565.7 N	Y =	429,508.1 N
X =	560,965.7 E	X =	519,783.7 E
LAT. =	32.180938 °N	LAT. =	32.180819 °N
LONG. =	104.269889 °W	LONG. =	104.269388 °W

CORNER COORDINATES (NAD 83 NME)			
A - Y =	418,877.2 N	A - X =	560,133.5 E
B - Y =	421,595.9 N	B - X =	560,189.3 E
C - Y =	424,292.6 N	C - X =	560,241.8 E
D - Y =	426,958.6 N	D - X =	560,264.0 E
E - Y =	429,624.7 N	E - X =	560,286.1 E
F - Y =	418,880.5 N	F - X =	561,471.8 E
G - Y =	421,603.9 N	G - X =	561,520.5 E
H - Y =	424,293.0 N	H - X =	561,567.2 E
I - Y =	426,948.3 N	I - X =	561,583.0 E
J - Y =	429,607.3 N	J - X =	561,598.9 E

CORNER COORDINATES (NAD 27 NME)			
A - Y =	418,819.8 N	A - X =	518,951.4 E
B - Y =	421,538.5 N	B - X =	519,007.2 E
C - Y =	424,235.1 N	C - X =	519,059.8 E
D - Y =	426,901.1 N	D - X =	519,082.0 E
E - Y =	429,567.1 N	E - X =	519,104.2 E
F - Y =	418,823.1 N	F - X =	520,289.7 E
G - Y =	421,546.5 N	G - X =	520,338.4 E
H - Y =	424,235.5 N	H - X =	520,385.1 E
I - Y =	426,890.7 N	I - X =	520,401.0 E
J - Y =	429,549.7 N	J - X =	520,416.9 E

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 9/21/23
Signature Date

Rodney Littleton
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.

09/21/2023
Date of Survey

Signature and Seal of
Professional Surveyor:



MARK DILLON HARP 23786
Certificate Number

AI 618.005002.00-11

Flat Creek Resources, LLC
 Jawbone Federal Com 015H
 SHL: 396' FSL & 1156' FWL 2-25S-26E
 BHL: 50' FNL & 680' FWL 35-24S-26E
 Eddy County, NM

DRILL PLAN PAGE 1

30-015-49664

"fee/fee/Fed"

The well was originally permitted by Murchison. Well, not yet spudded, was subsequently acquired by Flat Rock which is proposing downhole changes. Well type will change from gas to oil. Zone will change from Wolfcamp to Bone Spring. TVD will change from 9525' to 7705'. MD will change from 19701' to 18078'. BHL will move 1658' NW from 330' FNL & 2315' FWL to 50' FNL & 680' FWL. No change in SHL or in pad footprint.

Drilling Program

1. ESTIMATED TOPS

Formation	TVD	MD	Bearing
Salado salt	0'	0'	Fresh water
Base salt	1719'	1721'	N/A
Lamar limestone	1940'	1943'	N/A
Bell Canyon sandstone	1999'	2003'	hydrocarbons
Cherry Canyon sandstone	2839'	2848'	hydrocarbons
Brushy Canyon sandstone	3845'	3860'	hydrocarbons
Bone Spring limestone	5392'	5418'	hydrocarbons
First Bone Spring sandstone	6364'	6395'	hydrocarbons
Second Bone Spring shale	6524'	6555'	hydrocarbons
Second Bone Spring sandstone	6863'	6894'	hydrocarbons
KOP	7132'	7163'	hydrocarbons
Third Bone Spring shale	7230'	7262'	hydrocarbons
Harkey Bone Spring sandstone	7585'	7686'	hydrocarbons
TD	7705'	18078'	hydrocarbons

2. NOTABLE ZONES

Harkey member of the Bone Spring is the goal. Closest water well (C 01089) is 1.02 miles west. Water bearing strata were reported from 45' to 90' in the 96' deep well.

Flat Creek Resources, LLC
 Jawbone Federal Com 015H
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 Eddy County, NM

DRILL PLAN PAGE 2

30-015-49664

"fee/fee/Fed"

3. PRESSURE CONTROL

No change from original APD.

4. CASING & CEMENT

All casing will be new and API. No change in speed head from original APD.

Hole OD	Set MD	Set TVD	Casing OD	Weight (lb/ft)	Grade	Joint	Collapse	Burst	Tension
14.75"	0' - 300'	0' - 300'	10.75" surface	40.5	J-55	BTC	14.9	25.5	58.8
9.875"	0' - 1900'	0' - 1897'	7.625" intermediate	29.7	P-110 HC	BTC	7.2	7.0	12.1
6.75"	0' - 18078'	0' - 7705'	5.5" production	20	P-110 HC	TCBC-HT	3.1	3.3	3.9

Name	Type	Sacks	Yield	Cu. Ft.	Weight	Blend
Surface	Lead	135	1.68	226	12.8	35/65 Poz Premium C + 5% salt + 6% bentonite gel + 0.4% CPT-503P + 1/8 #/sk Dura-fiber
	Tail	85	1.34	113	14.8	Class C + 1% CaCl ₂ + ¼ #/sk cellophane flakes
TOC = GL		100% Excess			Centralizers per Onshore Order 1	
Intermediate	Lead	270	1.68	453	12.8	35/65 Poz Premium C + 5% salt + 6% bentonite gel + 0.4% CPT-503P + 1/8 #/sk Dura-fiber
	Tail	85	1.74	147	13.5	Class C + 1% CaCl ₂ + 4% bentonite gel + 0.4% CPT-503P + 1/8 #/sk Dura-fiber
TOC = GL		50% excess			Bow spring centralizers	
Production	Lead	260	2.82	733	10.4	Class C + 10% light weight bead + 5% silica fume

Flat Creek Resources, LLC
 Jawbone Federal Com 015H
 SHL: 396' FSL & 1156' FWL 2-25S-26E
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 Eddy County, NM

DRILL PLAN PAGE 3

30-015-49664

"fee/fee/Fed"

						alternative + 0.2% suspension aid + 0.3% fluid loss additive + 0.3% dispersant + 0.2% retarder
	Tail	720	1.42	1022	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' - 300'	8.8	45 - 60	NC
Intermediate	cut brine	300' - 1900'	10.0	29 - 30	NC
Production	High performance water base	1900' - 18078'	9.4	34 - 38	6 - 8

6. CORES, TESTS, & LOGS

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

7. DOWN HOLE CONDITIONS

No abnormal pressure or temperature is expected. Maximum expected bottom hole pressure is ≈ 3467 psi. Expected bottom hole temperature is $\approx 167^{\circ}$ F.

Flat Creek Resources, LLC
Jawbone Federal Com 015H
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Eddy County, NM

DRILL PLAN PAGE 4

30-015-49664

"fee/fee/Fed"

An H2S plan was attached to the original 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 1 - 2 months to drill and complete the well.



FLAT CREEK
RESOURCES

Well: Jawbone Fed Com LW 15H
Site: Jawbone
Project: Eddy County, New Mexico NAD27 NME
Design: rev1

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	VSec	Annotation
1	0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	
2	1200.00	0.00	0.000	1200.00	0.00	0.00	0.00	0.00	KOP Begin 2"/100' build
3	1524.65	6.49	238.351	1523.95	-9.64	-15.64	2.00	-9.86	Begin 6.49° tangent
4	6206.77	6.49	238.351	6176.05	-287.46	-486.36	0.00	-294.04	Begin 2"/100' drop
5	6531.42	0.00	0.000	6500.00	-297.10	-482.00	2.00	-303.90	Begin vertical hold @ 6500.00 TVD
6	7031.42	0.00	0.000	7000.00	-297.10	-482.00	0.00	-303.90	
7	7163.46	0.00	0.000	7132.04	-297.10	-482.00	0.00	-303.90	Begin 10"/100' build
8	8063.46	90.00	0.812	7705.00	275.80	-473.88	10.00	269.06	Begin 90.00° lateral
9	18028.18	90.00	0.812	7705.00	10239.52	-332.61	0.00	10233.78	LTP @ 18028.18 MD 7705.00 TVD
10	18078.19	90.00	0.812	7705.00	10289.52	-331.90	0.00	10283.78	PBHL/TD @ 18078.19 MD 7705.00 TVD

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting
Jawbone 03 BHL 50 FNL 680 FWL r1 7705.00		10289.52	-331.90	429508.100	519783.700
- plan hits target center					
Jawbone 03 FTP 100 FSL 680 FWL r17000.00		-297.10	-482.00	418921.500	519633.600
- plan hits target center					
Jawbone 03 LTP 100 FNL 680 FWL r17705.00		10239.52	-332.30	429458.100	519783.300
- plan misses target center by 0.31ft at 18028.18ft MD (7705.00 TVD, 10239.52 N, -332.61 E)					



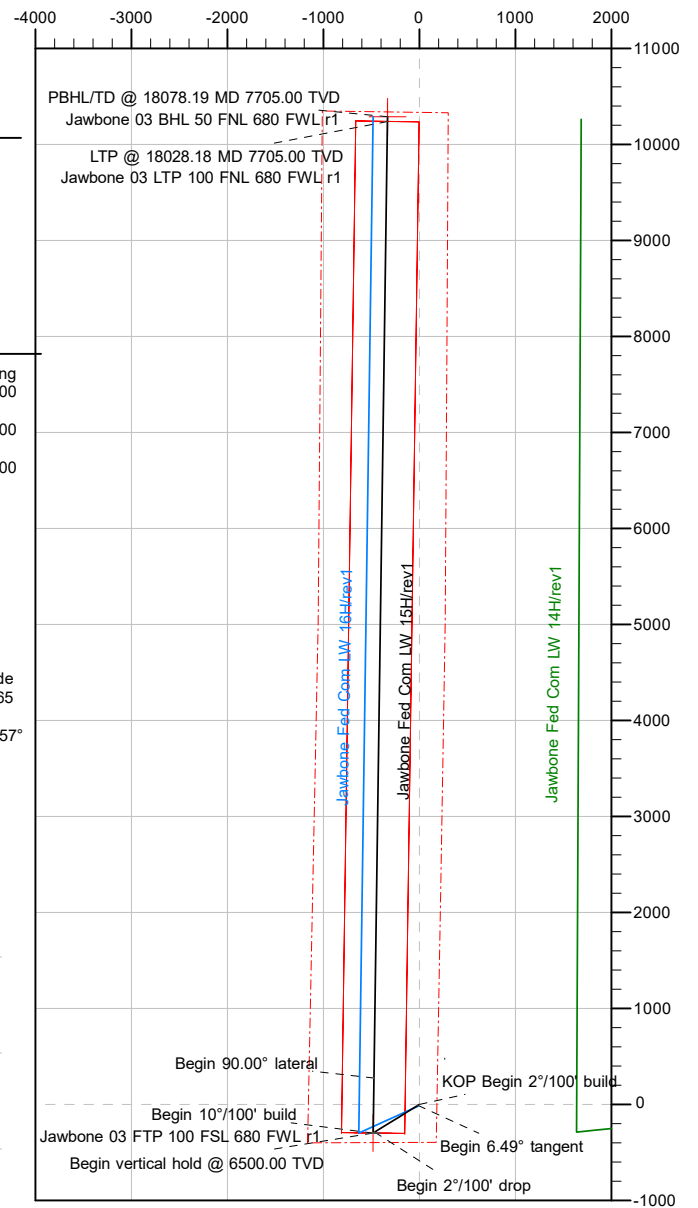
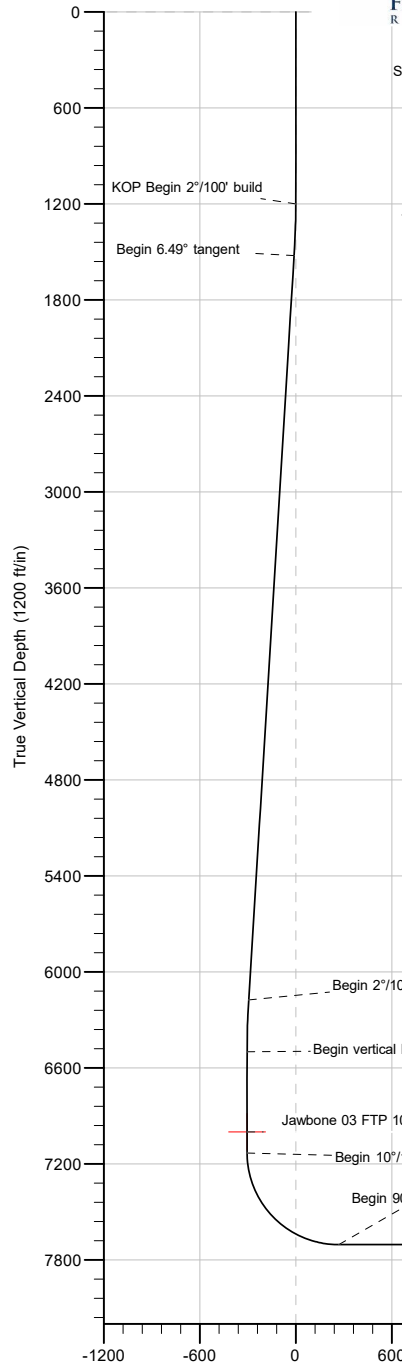
Azimuths to Grid North
True North: -0.03°
Magnetic North: 6.57°

Magnetic Field
Strength: 47150.5nT
Dip Angle: 59.66°
Date: 8/30/2023
Model: IGRF2020

Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico East 3001
System Datum: Mean Sea Level
Depth Reference: RKB=3381+26.5 @ 3407.50ft

Northing	Easting	Latitude	Longitude
419218.600	520115.600	32.152532039	-104.268335365

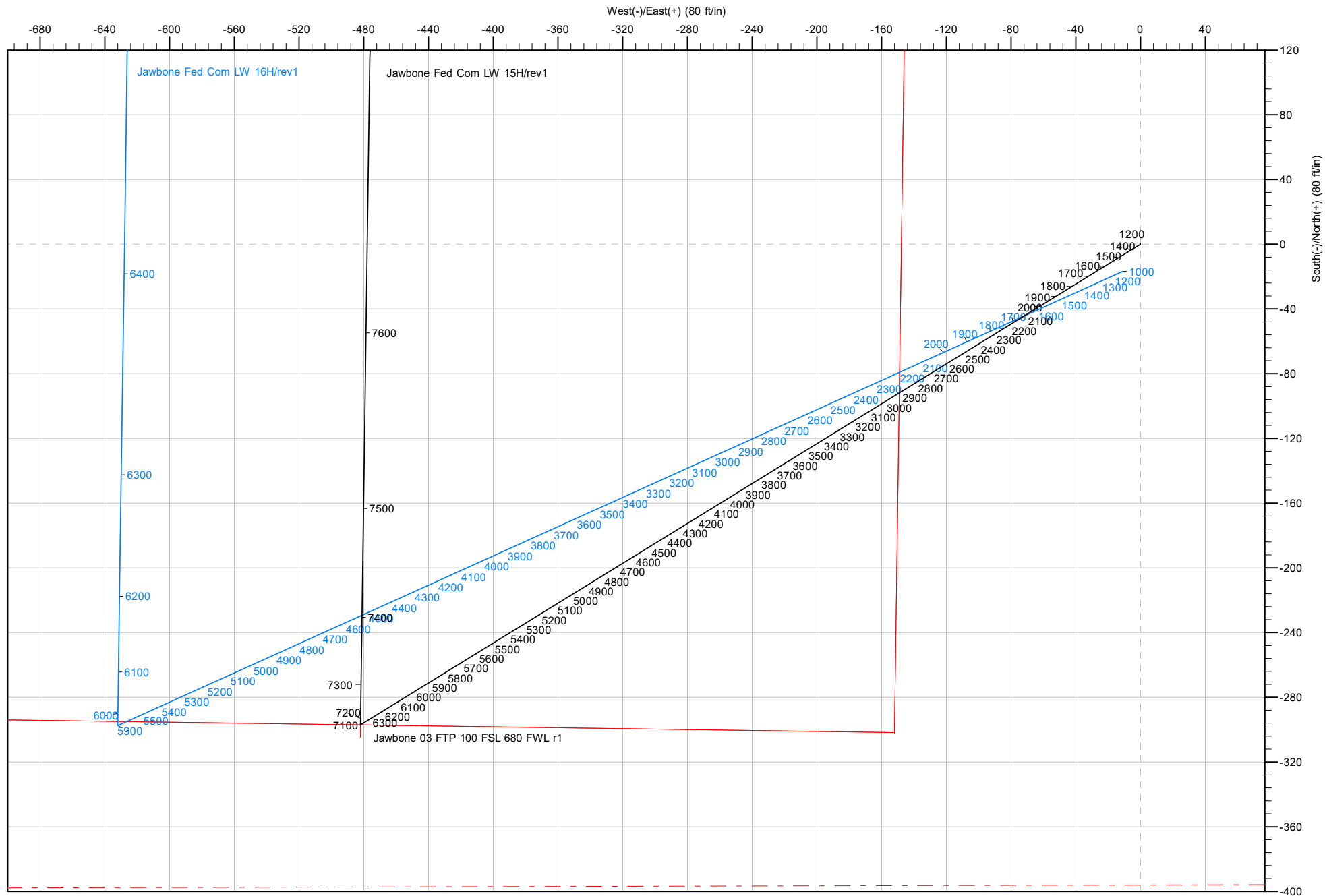
Total Corr (M->G): To convert a Magnetic Direction to a Grid Direction, Add 6.57°





FLAT CREEK
RESOURCES

Well: Jawbone Fed Com LW 15H
Site: Jawbone
Project: Eddy County, New Mexico NAD27 NME
Design: rev1



FLAT CREEK
RESOURCES

Planning Report

Database:	DT_Aug2923v16	Local Co-ordinate Reference:	Well Jawbone Fed Com LW 15H
Company:	Flat Creek Resources, LLC	TVD Reference:	RKB=3381+26.5 @ 3407.50ft
Project:	Eddy County, New Mexico NAD27 NME	MD Reference:	RKB=3381+26.5 @ 3407.50ft
Site:	Jawbone	North Reference:	Grid
Well:	Jawbone Fed Com LW 15H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev1		

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	Jawbone			
Site Position:		Northing:	419,218.600 usft	Latitude: 32.152532039
From:	Map	Easting:	520,115.600 usft	Longitude: -104.268335365
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "	

Well	Jawbone Fed Com LW 15H, Surf loc: 396 FSL 1156 FWL Section 02-T25S-R26E					
Well Position	+N/-S	0.00 ft	Northing:	419,218.600 usft	Latitude:	32.152532039
	+E/-W	0.00 ft	Easting:	520,115.600 usft	Longitude:	-104.268335365
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	3,381.00 ft
Grid Convergence:		0.03 °				

Wellbore	Original Hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	8/30/2023	6.60	59.66	47,150.46419916

Design	rev1			
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	0.812

Plan Survey Tool Program	Date	9/6/2023		
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	18,078.19 rev1 (Original Hole)	MWD	
			OWSG MWD - Standard	

FLAT CREEK
RESOURCES

Planning Report

Database:	DT_Aug2923v16	Local Co-ordinate Reference:	Well Jawbone Fed Com LW 15H
Company:	Flat Creek Resources, LLC	TVD Reference:	RKB=3381+26.5 @ 3407.50ft
Project:	Eddy County, New Mexico NAD27 NME	MD Reference:	RKB=3381+26.5 @ 3407.50ft
Site:	Jawbone	North Reference:	Grid
Well:	Jawbone Fed Com LW 15H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev1		

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	
1,200.00	0.00	0.000	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,524.65	6.49	238.351	1,523.95	-9.64	-15.64	2.00	2.00	0.00	238.35	
6,206.77	6.49	238.351	6,176.05	-287.46	-466.36	0.00	0.00	0.00	0.00	
6,531.42	0.00	0.000	6,500.00	-297.10	-482.00	2.00	-2.00	0.00	180.00	
7,031.42	0.00	0.000	7,000.00	-297.10	-482.00	0.00	0.00	0.00	0.00	Jawbone 03 FTP 100
7,163.46	0.00	0.000	7,132.04	-297.10	-482.00	0.00	0.00	0.00	0.00	
8,063.46	90.00	0.812	7,705.00	275.80	-473.88	10.00	10.00	0.09	0.81	
18,028.18	90.00	0.812	7,705.00	10,239.52	-332.61	0.00	0.00	0.00	0.00	
18,078.19	90.00	0.812	7,705.00	10,289.52	-331.90	0.00	0.00	0.00	0.00	Jawbone 03 BHL 50 F

FLAT CREEK
RESOURCES

Planning Report

Database:	DT_Aug2923v16	Local Co-ordinate Reference:	Well Jawbone Fed Com LW 15H
Company:	Flat Creek Resources, LLC	TVD Reference:	RKB=3381+26.5 @ 3407.50ft
Project:	Eddy County, New Mexico NAD27 NME	MD Reference:	RKB=3381+26.5 @ 3407.50ft
Site:	Jawbone	North Reference:	Grid
Well:	Jawbone Fed Com LW 15H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev1		

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
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
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
KOP Begin 2°/100' build									
1,300.00	2.00	238.351	1,299.98	-0.92	-1.49	-0.94	2.00	2.00	0.00
1,400.00	4.00	238.351	1,399.84	-3.66	-5.94	-3.75	2.00	2.00	0.00
1,500.00	6.00	238.351	1,499.45	-8.23	-13.36	-8.42	2.00	2.00	0.00
1,524.65	6.49	238.351	1,523.95	-9.64	-15.64	-9.86	2.00	2.00	0.00
Begin 6.49° tangent									
1,600.00	6.49	238.351	1,598.82	-14.11	-22.90	-14.44	0.00	0.00	0.00
1,700.00	6.49	238.351	1,698.18	-20.05	-32.52	-20.51	0.00	0.00	0.00
1,800.00	6.49	238.351	1,797.54	-25.98	-42.15	-26.57	0.00	0.00	0.00
1,900.00	6.49	238.351	1,896.90	-31.91	-51.78	-32.64	0.00	0.00	0.00
2,000.00	6.49	238.351	1,996.26	-37.85	-61.40	-38.71	0.00	0.00	0.00
2,100.00	6.49	238.351	2,095.62	-43.78	-71.03	-44.78	0.00	0.00	0.00
2,200.00	6.49	238.351	2,194.97	-49.71	-80.65	-50.85	0.00	0.00	0.00
2,300.00	6.49	238.351	2,294.33	-55.65	-90.28	-56.92	0.00	0.00	0.00
2,400.00	6.49	238.351	2,393.69	-61.58	-99.91	-62.99	0.00	0.00	0.00
2,500.00	6.49	238.351	2,493.05	-67.52	-109.53	-69.06	0.00	0.00	0.00
2,600.00	6.49	238.351	2,592.41	-73.45	-119.16	-75.13	0.00	0.00	0.00
2,700.00	6.49	238.351	2,691.77	-79.38	-128.79	-81.20	0.00	0.00	0.00
2,800.00	6.49	238.351	2,791.13	-85.32	-138.41	-87.27	0.00	0.00	0.00
2,900.00	6.49	238.351	2,890.48	-91.25	-148.04	-93.34	0.00	0.00	0.00
3,000.00	6.49	238.351	2,989.84	-97.18	-157.66	-99.41	0.00	0.00	0.00
3,100.00	6.49	238.351	3,089.20	-103.12	-167.29	-105.48	0.00	0.00	0.00
3,200.00	6.49	238.351	3,188.56	-109.05	-176.92	-111.55	0.00	0.00	0.00
3,300.00	6.49	238.351	3,287.92	-114.98	-186.54	-117.62	0.00	0.00	0.00
3,400.00	6.49	238.351	3,387.28	-120.92	-196.17	-123.68	0.00	0.00	0.00
3,500.00	6.49	238.351	3,486.64	-126.85	-205.80	-129.75	0.00	0.00	0.00
3,600.00	6.49	238.351	3,585.99	-132.78	-215.42	-135.82	0.00	0.00	0.00
3,700.00	6.49	238.351	3,685.35	-138.72	-225.05	-141.89	0.00	0.00	0.00
3,800.00	6.49	238.351	3,784.71	-144.65	-234.67	-147.96	0.00	0.00	0.00
3,900.00	6.49	238.351	3,884.07	-150.58	-244.30	-154.03	0.00	0.00	0.00
4,000.00	6.49	238.351	3,983.43	-156.52	-253.93	-160.10	0.00	0.00	0.00
4,100.00	6.49	238.351	4,082.79	-162.45	-263.55	-166.17	0.00	0.00	0.00
4,200.00	6.49	238.351	4,182.15	-168.39	-273.18	-172.24	0.00	0.00	0.00
4,300.00	6.49	238.351	4,281.50	-174.32	-282.81	-178.31	0.00	0.00	0.00
4,400.00	6.49	238.351	4,380.86	-180.25	-292.43	-184.38	0.00	0.00	0.00
4,500.00	6.49	238.351	4,480.22	-186.19	-302.06	-190.45	0.00	0.00	0.00
4,600.00	6.49	238.351	4,579.58	-192.12	-311.69	-196.52	0.00	0.00	0.00
4,700.00	6.49	238.351	4,678.94	-198.05	-321.31	-202.59	0.00	0.00	0.00
4,800.00	6.49	238.351	4,778.30	-203.99	-330.94	-208.66	0.00	0.00	0.00
4,900.00	6.49	238.351	4,877.66	-209.92	-340.56	-214.73	0.00	0.00	0.00
5,000.00	6.49	238.351	4,977.01	-215.85	-350.19	-220.80	0.00	0.00	0.00

FLAT CREEK
RESOURCES

Planning Report

Database:	DT_Aug2923v16	Local Co-ordinate Reference:	Well Jawbone Fed Com LW 15H
Company:	Flat Creek Resources, LLC	TVD Reference:	RKB=3381+26.5 @ 3407.50ft
Project:	Eddy County, New Mexico NAD27 NME	MD Reference:	RKB=3381+26.5 @ 3407.50ft
Site:	Jawbone	North Reference:	Grid
Well:	Jawbone Fed Com LW 15H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev1		

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)
5,100.00	6.49	238.351	5,076.37	-221.79	-359.82	-226.86	0.00	0.00	0.00
5,200.00	6.49	238.351	5,175.73	-227.72	-369.44	-232.93	0.00	0.00	0.00
5,300.00	6.49	238.351	5,275.09	-233.65	-379.07	-239.00	0.00	0.00	0.00
5,400.00	6.49	238.351	5,374.45	-239.59	-388.70	-245.07	0.00	0.00	0.00
5,500.00	6.49	238.351	5,473.81	-245.52	-398.32	-251.14	0.00	0.00	0.00
5,600.00	6.49	238.351	5,573.17	-251.46	-407.95	-257.21	0.00	0.00	0.00
5,700.00	6.49	238.351	5,672.52	-257.39	-417.57	-263.28	0.00	0.00	0.00
5,800.00	6.49	238.351	5,771.88	-263.32	-427.20	-269.35	0.00	0.00	0.00
5,900.00	6.49	238.351	5,871.24	-269.26	-436.83	-275.42	0.00	0.00	0.00
6,000.00	6.49	238.351	5,970.60	-275.19	-446.45	-281.49	0.00	0.00	0.00
6,100.00	6.49	238.351	6,069.96	-281.12	-456.08	-287.56	0.00	0.00	0.00
6,206.77	6.49	238.351	6,176.05	-287.46	-466.36	-294.04	0.00	0.00	0.00
Begin 2°/100' drop									
6,300.00	4.63	238.351	6,268.83	-292.20	-474.05	-298.89	2.00	-2.00	0.00
6,400.00	2.63	238.351	6,368.63	-295.52	-479.44	-302.28	2.00	-2.00	0.00
6,500.00	0.63	238.351	6,468.58	-297.01	-481.85	-303.81	2.00	-2.00	0.00
6,531.42	0.00	0.000	6,500.00	-297.10	-482.00	-303.90	2.00	-2.00	0.00
Begin vertical hold @ 6500.00 TVD									
6,600.00	0.00	0.000	6,568.58	-297.10	-482.00	-303.90	0.00	0.00	0.00
6,700.00	0.00	0.000	6,668.58	-297.10	-482.00	-303.90	0.00	0.00	0.00
6,800.00	0.00	0.000	6,768.58	-297.10	-482.00	-303.90	0.00	0.00	0.00
6,900.00	0.00	0.000	6,868.58	-297.10	-482.00	-303.90	0.00	0.00	0.00
7,000.00	0.00	0.000	6,968.58	-297.10	-482.00	-303.90	0.00	0.00	0.00
7,031.42	0.00	0.000	7,000.00	-297.10	-482.00	-303.90	0.00	0.00	0.00
7,100.00	0.00	0.000	7,068.58	-297.10	-482.00	-303.90	0.00	0.00	0.00
7,163.46	0.00	0.000	7,132.04	-297.10	-482.00	-303.90	0.00	0.00	0.00
Begin 10°/100' build									
7,200.00	3.65	0.812	7,168.55	-295.94	-481.98	-302.74	10.00	10.00	0.00
7,250.00	8.65	0.812	7,218.25	-290.58	-481.91	-297.38	10.00	10.00	0.00
7,300.00	13.65	0.812	7,267.29	-280.91	-481.77	-287.71	10.00	10.00	0.00
7,350.00	18.65	0.812	7,315.30	-267.00	-481.57	-273.80	10.00	10.00	0.00
7,400.00	23.65	0.812	7,361.92	-248.97	-481.32	-255.76	10.00	10.00	0.00
7,450.00	28.65	0.812	7,406.78	-226.94	-481.01	-233.73	10.00	10.00	0.00
7,500.00	33.65	0.812	7,449.56	-201.08	-480.64	-207.87	10.00	10.00	0.00
7,550.00	38.65	0.812	7,489.92	-171.60	-480.22	-178.39	10.00	10.00	0.00
7,600.00	43.65	0.812	7,527.55	-138.71	-479.76	-145.49	10.00	10.00	0.00
7,650.00	48.65	0.812	7,562.18	-102.66	-479.24	-109.44	10.00	10.00	0.00
7,700.00	53.65	0.812	7,593.53	-63.74	-478.69	-70.51	10.00	10.00	0.00
7,750.00	58.65	0.812	7,621.37	-22.23	-478.10	-29.00	10.00	10.00	0.00
7,800.00	63.65	0.812	7,645.48	21.55	-477.48	14.78	10.00	10.00	0.00
7,850.00	68.65	0.812	7,665.69	67.26	-476.83	60.50	10.00	10.00	0.00
7,900.00	73.65	0.812	7,681.84	114.56	-476.16	107.80	10.00	10.00	0.00
7,950.00	78.65	0.812	7,693.80	163.09	-475.48	156.34	10.00	10.00	0.00
8,000.00	83.65	0.812	7,701.49	212.47	-474.78	205.72	10.00	10.00	0.00
8,050.00	88.65	0.812	7,704.84	262.34	-474.07	255.60	10.00	10.00	0.00
8,063.46	90.00	0.812	7,705.00	275.80	-473.88	269.06	10.00	10.00	0.00
Begin 90.00° lateral									
8,100.00	90.00	0.812	7,705.00	312.33	-473.36	305.60	0.00	0.00	0.00
8,200.00	90.00	0.812	7,705.00	412.32	-471.94	405.60	0.00	0.00	0.00
8,300.00	90.00	0.812	7,705.00	512.31	-470.52	505.60	0.00	0.00	0.00
8,400.00	90.00	0.812	7,705.00	612.30	-469.11	605.60	0.00	0.00	0.00
8,500.00	90.00	0.812	7,705.00	712.29	-467.69	705.60	0.00	0.00	0.00
8,600.00	90.00	0.812	7,705.00	812.28	-466.27	805.60	0.00	0.00	0.00

FLAT CREEK
RESOURCES

Planning Report

Database:	DT_Aug2923v16	Local Co-ordinate Reference:	Well Jawbone Fed Com LW 15H
Company:	Flat Creek Resources, LLC	TVD Reference:	RKB=3381+26.5 @ 3407.50ft
Project:	Eddy County, New Mexico NAD27 NME	MD Reference:	RKB=3381+26.5 @ 3407.50ft
Site:	Jawbone	North Reference:	Grid
Well:	Jawbone Fed Com LW 15H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev1		

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)
8,700.00	90.00	0.812	7,705.00	912.27	-464.85	905.60	0.00	0.00	0.00
8,800.00	90.00	0.812	7,705.00	1,012.26	-463.44	1,005.60	0.00	0.00	0.00
8,900.00	90.00	0.812	7,705.00	1,112.25	-462.02	1,105.60	0.00	0.00	0.00
9,000.00	90.00	0.812	7,705.00	1,212.24	-460.60	1,205.60	0.00	0.00	0.00
9,100.00	90.00	0.812	7,705.00	1,312.23	-459.18	1,305.60	0.00	0.00	0.00
9,200.00	90.00	0.812	7,705.00	1,412.22	-457.77	1,405.60	0.00	0.00	0.00
9,300.00	90.00	0.812	7,705.00	1,512.21	-456.35	1,505.60	0.00	0.00	0.00
9,400.00	90.00	0.812	7,705.00	1,612.20	-454.93	1,605.60	0.00	0.00	0.00
9,500.00	90.00	0.812	7,705.00	1,712.19	-453.51	1,705.60	0.00	0.00	0.00
9,600.00	90.00	0.812	7,705.00	1,812.18	-452.09	1,805.60	0.00	0.00	0.00
9,700.00	90.00	0.812	7,705.00	1,912.17	-450.68	1,905.60	0.00	0.00	0.00
9,800.00	90.00	0.812	7,705.00	2,012.16	-449.26	2,005.60	0.00	0.00	0.00
9,900.00	90.00	0.812	7,705.00	2,112.15	-447.84	2,105.60	0.00	0.00	0.00
10,000.00	90.00	0.812	7,705.00	2,212.14	-446.42	2,205.60	0.00	0.00	0.00
10,100.00	90.00	0.812	7,705.00	2,312.13	-445.01	2,305.60	0.00	0.00	0.00
10,200.00	90.00	0.812	7,705.00	2,412.12	-443.59	2,405.60	0.00	0.00	0.00
10,300.00	90.00	0.812	7,705.00	2,512.11	-442.17	2,505.60	0.00	0.00	0.00
10,400.00	90.00	0.812	7,705.00	2,612.10	-440.75	2,605.60	0.00	0.00	0.00
10,500.00	90.00	0.812	7,705.00	2,712.09	-439.34	2,705.60	0.00	0.00	0.00
10,600.00	90.00	0.812	7,705.00	2,812.08	-437.92	2,805.60	0.00	0.00	0.00
10,700.00	90.00	0.812	7,705.00	2,912.07	-436.50	2,905.60	0.00	0.00	0.00
10,800.00	90.00	0.812	7,705.00	3,012.06	-435.08	3,005.60	0.00	0.00	0.00
10,900.00	90.00	0.812	7,705.00	3,112.05	-433.67	3,105.60	0.00	0.00	0.00
11,000.00	90.00	0.812	7,705.00	3,212.04	-432.25	3,205.60	0.00	0.00	0.00
11,100.00	90.00	0.812	7,705.00	3,312.03	-430.83	3,305.60	0.00	0.00	0.00
11,200.00	90.00	0.812	7,705.00	3,412.02	-429.41	3,405.60	0.00	0.00	0.00
11,300.00	90.00	0.812	7,705.00	3,512.01	-427.99	3,505.60	0.00	0.00	0.00
11,400.00	90.00	0.812	7,705.00	3,612.00	-426.58	3,605.60	0.00	0.00	0.00
11,500.00	90.00	0.812	7,705.00	3,711.99	-425.16	3,705.60	0.00	0.00	0.00
11,600.00	90.00	0.812	7,705.00	3,811.98	-423.74	3,805.60	0.00	0.00	0.00
11,700.00	90.00	0.812	7,705.00	3,911.97	-422.32	3,905.60	0.00	0.00	0.00
11,800.00	90.00	0.812	7,705.00	4,011.96	-420.91	4,005.60	0.00	0.00	0.00
11,900.00	90.00	0.812	7,705.00	4,111.95	-419.49	4,105.60	0.00	0.00	0.00
12,000.00	90.00	0.812	7,705.00	4,211.94	-418.07	4,205.60	0.00	0.00	0.00
12,100.00	90.00	0.812	7,705.00	4,311.93	-416.65	4,305.60	0.00	0.00	0.00
12,200.00	90.00	0.812	7,705.00	4,411.92	-415.24	4,405.60	0.00	0.00	0.00
12,300.00	90.00	0.812	7,705.00	4,511.91	-413.82	4,505.60	0.00	0.00	0.00
12,400.00	90.00	0.812	7,705.00	4,611.90	-412.40	4,605.60	0.00	0.00	0.00
12,500.00	90.00	0.812	7,705.00	4,711.89	-410.98	4,705.60	0.00	0.00	0.00
12,600.00	90.00	0.812	7,705.00	4,811.88	-409.56	4,805.60	0.00	0.00	0.00
12,700.00	90.00	0.812	7,705.00	4,911.87	-408.15	4,905.60	0.00	0.00	0.00
12,800.00	90.00	0.812	7,705.00	5,011.86	-406.73	5,005.60	0.00	0.00	0.00
12,900.00	90.00	0.812	7,705.00	5,111.85	-405.31	5,105.60	0.00	0.00	0.00
13,000.00	90.00	0.812	7,705.00	5,211.84	-403.89	5,205.60	0.00	0.00	0.00
13,100.00	90.00	0.812	7,705.00	5,311.83	-402.48	5,305.60	0.00	0.00	0.00
13,200.00	90.00	0.812	7,705.00	5,411.82	-401.06	5,405.60	0.00	0.00	0.00
13,300.00	90.00	0.812	7,705.00	5,511.81	-399.64	5,505.60	0.00	0.00	0.00
13,400.00	90.00	0.812	7,705.00	5,611.80	-398.22	5,605.60	0.00	0.00	0.00
13,500.00	90.00	0.812	7,705.00	5,711.79	-396.81	5,705.60	0.00	0.00	0.00
13,600.00	90.00	0.812	7,705.00	5,811.78	-395.39	5,805.60	0.00	0.00	0.00
13,700.00	90.00	0.812	7,705.00	5,911.77	-393.97	5,905.60	0.00	0.00	0.00
13,800.00	90.00	0.812	7,705.00	6,011.76	-392.55	6,005.60	0.00	0.00	0.00
13,900.00	90.00	0.812	7,705.00	6,111.75	-391.13	6,105.60	0.00	0.00	0.00
14,000.00	90.00	0.812	7,705.00	6,211.74	-389.72	6,205.60	0.00	0.00	0.00

FLAT CREEK
RESOURCES

Planning Report

Database:	DT_Aug2923v16	Local Co-ordinate Reference:	Well Jawbone Fed Com LW 15H
Company:	Flat Creek Resources, LLC	TVD Reference:	RKB=3381+26.5 @ 3407.50ft
Project:	Eddy County, New Mexico NAD27 NME	MD Reference:	RKB=3381+26.5 @ 3407.50ft
Site:	Jawbone	North Reference:	Grid
Well:	Jawbone Fed Com LW 15H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev1		

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)
14,100.00	90.00	0.812	7,705.00	6,311.73	-388.30	6,305.60	0.00	0.00	0.00
14,200.00	90.00	0.812	7,705.00	6,411.72	-386.88	6,405.60	0.00	0.00	0.00
14,300.00	90.00	0.812	7,705.00	6,511.71	-385.46	6,505.60	0.00	0.00	0.00
14,400.00	90.00	0.812	7,705.00	6,611.70	-384.05	6,605.60	0.00	0.00	0.00
14,500.00	90.00	0.812	7,705.00	6,711.69	-382.63	6,705.60	0.00	0.00	0.00
14,600.00	90.00	0.812	7,705.00	6,811.68	-381.21	6,805.60	0.00	0.00	0.00
14,700.00	90.00	0.812	7,705.00	6,911.67	-379.79	6,905.60	0.00	0.00	0.00
14,800.00	90.00	0.812	7,705.00	7,011.66	-378.38	7,005.60	0.00	0.00	0.00
14,900.00	90.00	0.812	7,705.00	7,111.65	-376.96	7,105.60	0.00	0.00	0.00
15,000.00	90.00	0.812	7,705.00	7,211.64	-375.54	7,205.60	0.00	0.00	0.00
15,100.00	90.00	0.812	7,705.00	7,311.63	-374.12	7,305.60	0.00	0.00	0.00
15,200.00	90.00	0.812	7,705.00	7,411.62	-372.70	7,405.60	0.00	0.00	0.00
15,300.00	90.00	0.812	7,705.00	7,511.61	-371.29	7,505.60	0.00	0.00	0.00
15,400.00	90.00	0.812	7,705.00	7,611.60	-369.87	7,605.60	0.00	0.00	0.00
15,500.00	90.00	0.812	7,705.00	7,711.59	-368.45	7,705.60	0.00	0.00	0.00
15,600.00	90.00	0.812	7,705.00	7,811.58	-367.03	7,805.60	0.00	0.00	0.00
15,700.00	90.00	0.812	7,705.00	7,911.57	-365.62	7,905.60	0.00	0.00	0.00
15,800.00	90.00	0.812	7,705.00	8,011.56	-364.20	8,005.60	0.00	0.00	0.00
15,900.00	90.00	0.812	7,705.00	8,111.55	-362.78	8,105.60	0.00	0.00	0.00
16,000.00	90.00	0.812	7,705.00	8,211.54	-361.36	8,205.60	0.00	0.00	0.00
16,100.00	90.00	0.812	7,705.00	8,311.53	-359.95	8,305.60	0.00	0.00	0.00
16,200.00	90.00	0.812	7,705.00	8,411.52	-358.53	8,405.60	0.00	0.00	0.00
16,300.00	90.00	0.812	7,705.00	8,511.51	-357.11	8,505.60	0.00	0.00	0.00
16,400.00	90.00	0.812	7,705.00	8,611.50	-355.69	8,605.60	0.00	0.00	0.00
16,500.00	90.00	0.812	7,705.00	8,711.49	-354.27	8,705.60	0.00	0.00	0.00
16,600.00	90.00	0.812	7,705.00	8,811.48	-352.86	8,805.60	0.00	0.00	0.00
16,700.00	90.00	0.812	7,705.00	8,911.47	-351.44	8,905.60	0.00	0.00	0.00
16,800.00	90.00	0.812	7,705.00	9,011.46	-350.02	9,005.60	0.00	0.00	0.00
16,900.00	90.00	0.812	7,705.00	9,111.45	-348.60	9,105.60	0.00	0.00	0.00
17,000.00	90.00	0.812	7,705.00	9,211.44	-347.19	9,205.60	0.00	0.00	0.00
17,100.00	90.00	0.812	7,705.00	9,311.43	-345.77	9,305.60	0.00	0.00	0.00
17,200.00	90.00	0.812	7,705.00	9,411.42	-344.35	9,405.60	0.00	0.00	0.00
17,300.00	90.00	0.812	7,705.00	9,511.41	-342.93	9,505.60	0.00	0.00	0.00
17,400.00	90.00	0.812	7,705.00	9,611.40	-341.52	9,605.60	0.00	0.00	0.00
17,500.00	90.00	0.812	7,705.00	9,711.39	-340.10	9,705.60	0.00	0.00	0.00
17,600.00	90.00	0.812	7,705.00	9,811.38	-338.68	9,805.60	0.00	0.00	0.00
17,700.00	90.00	0.812	7,705.00	9,911.37	-337.26	9,905.60	0.00	0.00	0.00
17,800.00	90.00	0.812	7,705.00	10,011.36	-335.84	10,005.60	0.00	0.00	0.00
17,900.00	90.00	0.812	7,705.00	10,111.35	-334.43	10,105.60	0.00	0.00	0.00
18,000.00	90.00	0.812	7,705.00	10,211.34	-333.01	10,205.60	0.00	0.00	0.00
18,028.18	90.00	0.812	7,705.00	10,239.52	-332.61	10,233.78	0.00	0.00	0.00
LTP @ 18028.18 MD 7705.00 TVD									
18,078.19	90.00	0.812	7,705.00	10,289.52	-331.90	10,283.78	0.00	0.00	0.00
PBHL/TD @ 18078.19 MD 7705.00 TVD									

FLAT CREEK
RESOURCES

Planning Report

Database:	DT_Aug2923v16	Local Co-ordinate Reference:	Well Jawbone Fed Com LW 15H
Company:	Flat Creek Resources, LLC	TVD Reference:	RKB=3381+26.5 @ 3407.50ft
Project:	Eddy County, New Mexico NAD27 NME	MD Reference:	RKB=3381+26.5 @ 3407.50ft
Site:	Jawbone	North Reference:	Grid
Well:	Jawbone Fed Com LW 15H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev1		

Design Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(ft)	(ft)	(ft)	(usft)	(usft)		
- Shape									
Jawbone 03 FTP 100 FS - plan hits target center - Rectangle (sides W660.00 H10,537.68 D0.00)	0.00	0.812	7,000.00	-297.10	-482.00	418,921.500	519,633.600	32.151716094	-104.269893379
Jawbone 03 BHL 50 FNI - plan hits target center - Point	0.00	0.000	7,705.00	10,289.52	-331.90	429,508.100	519,783.700	32.180818615	-104.269388052
Jawbone 03 LTP 100 FN - plan misses target center by 0.31ft at 18028.18ft MD (7705.00 TVD, 10239.52 N, -332.61 E) - Point	0.00	0.000	7,705.00	10,239.52	-332.30	429,458.100	519,783.300	32.180681165	-104.269389441

Plan Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(ft)	(ft)	+N/-S (ft)	+E/-W (ft)	
1,200.00	1,200.00	0.00	0.00	KOP Begin 2°/100' build
1,524.65	1,523.95	-9.64	-15.64	Begin 6.49° tangent
6,206.77	6,176.05	-287.46	-466.36	Begin 2°/100' drop
6,531.42	6,500.00	-297.10	-482.00	Begin vertical hold @ 6500.00 TVD
7,031.42	7,000.00	-297.10	-482.00	
7,163.46	7,132.04	-297.10	-482.00	Begin 10°/100' build
8,063.46	7,705.00	275.80	-473.88	Begin 90.00° lateral
18,028.18	7,705.00	10,239.52	-332.61	LTP @ 18028.18 MD 7705.00 TVD
18,078.19	7,705.00	10,289.52	-331.90	PBHL/TD @ 18078.19 MD 7705.00 TVD

FLAT CREEK
RESOURCES

Planning Report - Geographic

Database:	DT_Aug2923v16	Local Co-ordinate Reference:	Well Jawbone Fed Com LW 15H
Company:	Flat Creek Resources, LLC	TVD Reference:	RKB=3381+26.5 @ 3407.50ft
Project:	Eddy County, New Mexico NAD27 NME	MD Reference:	RKB=3381+26.5 @ 3407.50ft
Site:	Jawbone	North Reference:	Grid
Well:	Jawbone Fed Com LW 15H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev1		

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		Jawbone			
Site Position:		Northing:	419,218.600 usft	Latitude:	32.152532039
From:	Map	Easting:	520,115.600 usft	Longitude:	-104.268335365
Position Uncertainty:		0.00 ft	Slot Radius:	13-3/16 "	

Well	Jawbone Fed Com LW 15H, Surf loc: 396 FSL 1156 FWL Section 02-T25S-R26E					
Well Position	+N/-S	0.00 ft	Northing:	419,218.600 usft	Latitude:	32.152532039
	+E/-W	0.00 ft	Easting:	520,115.600 usft	Longitude:	-104.268335365
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	3,381.00 ft
Grid Convergence:						

Wellbore	Original Hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	8/30/2023	6.60	59.66	47,150.46419916

Design	rev1			
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	0.812

Plan Survey Tool Program		Date			
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.00	18,078.19 rev1 (Original Hole)			

FLAT CREEK
RESOURCES

Planning Report - Geographic

Database:	DT_Aug2923v16	Local Co-ordinate Reference:	Well Jawbone Fed Com LW 15H
Company:	Flat Creek Resources, LLC	TVD Reference:	RKB=3381+26.5 @ 3407.50ft
Project:	Eddy County, New Mexico NAD27 NME	MD Reference:	RKB=3381+26.5 @ 3407.50ft
Site:	Jawbone	North Reference:	Grid
Well:	Jawbone Fed Com LW 15H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev1		

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	
1,200.00	0.00	0.000	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,524.65	6.49	238.351	1,523.95	-9.64	-15.64	2.00	2.00	0.00	238.35	
6,206.77	6.49	238.351	6,176.05	-287.46	-466.36	0.00	0.00	0.00	0.00	
6,531.42	0.00	0.000	6,500.00	-297.10	-482.00	2.00	-2.00	0.00	180.00	
7,031.42	0.00	0.000	7,000.00	-297.10	-482.00	0.00	0.00	0.00	0.00	Jawbone 03 FTP 100
7,163.46	0.00	0.000	7,132.04	-297.10	-482.00	0.00	0.00	0.00	0.00	
8,063.46	90.00	0.812	7,705.00	275.80	-473.88	10.00	10.00	0.09	0.81	
18,028.18	90.00	0.812	7,705.00	10,239.52	-332.61	0.00	0.00	0.00	0.00	
18,078.19	90.00	0.812	7,705.00	10,289.52	-331.90	0.00	0.00	0.00	0.00	Jawbone 03 BHL 50 F

FLAT CREEK
RESOURCES

Planning Report - Geographic

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Company:	Flat Creek Resources, LLC	TVD Reference:	RKB=3381+26.5 @ 3407.50ft
Project:	Eddy County, New Mexico NAD27 NME	MD Reference:	RKB=3381+26.5 @ 3407.50ft
Site:	Jawbone	North Reference:	Grid
Well:	Jawbone Fed Com LW 15H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev1		

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	419,218.600	520,115.600	32.152532039	-104.268335365
100.00	0.00	0.000	100.00	0.00	0.00	419,218.600	520,115.600	32.152532039	-104.268335365
200.00	0.00	0.000	200.00	0.00	0.00	419,218.600	520,115.600	32.152532039	-104.268335365
300.00	0.00	0.000	300.00	0.00	0.00	419,218.600	520,115.600	32.152532039	-104.268335365
400.00	0.00	0.000	400.00	0.00	0.00	419,218.600	520,115.600	32.152532039	-104.268335365
500.00	0.00	0.000	500.00	0.00	0.00	419,218.600	520,115.600	32.152532039	-104.268335365
600.00	0.00	0.000	600.00	0.00	0.00	419,218.600	520,115.600	32.152532039	-104.268335365
700.00	0.00	0.000	700.00	0.00	0.00	419,218.600	520,115.600	32.152532039	-104.268335365
800.00	0.00	0.000	800.00	0.00	0.00	419,218.600	520,115.600	32.152532039	-104.268335365
900.00	0.00	0.000	900.00	0.00	0.00	419,218.600	520,115.600	32.152532039	-104.268335365
1,000.00	0.00	0.000	1,000.00	0.00	0.00	419,218.600	520,115.600	32.152532039	-104.268335365
1,100.00	0.00	0.000	1,100.00	0.00	0.00	419,218.600	520,115.600	32.152532039	-104.268335365
1,200.00	0.00	0.000	1,200.00	0.00	0.00	419,218.600	520,115.600	32.152532039	-104.268335365
KOP Begin 2°/100' build									
1,300.00	2.00	238.351	1,299.98	-0.92	-1.49	419,217.684	520,114.115	32.152529524	-104.268340167
1,400.00	4.00	238.351	1,399.84	-3.66	-5.94	419,214.938	520,109.660	32.152521983	-104.268354567
1,500.00	6.00	238.351	1,499.45	-8.23	-13.36	419,210.365	520,102.241	32.152509424	-104.268378548
1,524.65	6.49	238.351	1,523.95	-9.64	-15.64	419,208.958	520,099.958	32.152505559	-104.268385928
Begin 6.49° tangent									
1,600.00	6.49	238.351	1,598.82	-14.11	-22.90	419,204.487	520,092.704	32.152493280	-104.268409375
1,700.00	6.49	238.351	1,698.18	-20.05	-32.52	419,198.554	520,083.078	32.152476985	-104.268440491
1,800.00	6.49	238.351	1,797.54	-25.98	-42.15	419,192.620	520,073.452	32.152460689	-104.268471607
1,900.00	6.49	238.351	1,896.90	-31.91	-51.78	419,186.686	520,063.825	32.152444394	-104.268502723
2,000.00	6.49	238.351	1,996.26	-37.85	-61.40	419,180.753	520,054.199	32.152428098	-104.268533839
2,100.00	6.49	238.351	2,095.62	-43.78	-71.03	419,174.819	520,044.573	32.152411803	-104.268564956
2,200.00	6.49	238.351	2,194.97	-49.71	-80.65	419,168.886	520,034.946	32.152395507	-104.268596072
2,300.00	6.49	238.351	2,294.33	-55.65	-90.28	419,162.952	520,025.320	32.152379211	-104.268627188
2,400.00	6.49	238.351	2,393.69	-61.58	-99.91	419,157.019	520,015.694	32.152362916	-104.268658304
2,500.00	6.49	238.351	2,493.05	-67.52	-109.53	419,151.085	520,006.068	32.152346620	-104.268689420
2,600.00	6.49	238.351	2,592.41	-73.45	-119.16	419,145.152	519,996.441	32.152330325	-104.268720536
2,700.00	6.49	238.351	2,691.77	-79.38	-128.79	419,139.218	519,986.815	32.152314029	-104.268751652
2,800.00	6.49	238.351	2,791.13	-85.32	-138.41	419,133.285	519,977.189	32.152297733	-104.268782768
2,900.00	6.49	238.351	2,890.48	-91.25	-148.04	419,127.351	519,967.562	32.152281438	-104.268813884
3,000.00	6.49	238.351	2,989.84	-97.18	-157.66	419,121.417	519,957.936	32.152265142	-104.268845001
3,100.00	6.49	238.351	3,089.20	-103.12	-167.29	419,115.484	519,948.310	32.152248847	-104.268876117
3,200.00	6.49	238.351	3,188.56	-109.05	-176.92	419,109.550	519,938.684	32.152232551	-104.268907233
3,300.00	6.49	238.351	3,287.92	-114.98	-186.54	419,103.617	519,929.057	32.152216255	-104.268938349
3,400.00	6.49	238.351	3,387.28	-120.92	-196.17	419,097.683	519,919.431	32.152199960	-104.268969465
3,500.00	6.49	238.351	3,486.64	-126.85	-205.80	419,091.750	519,909.805	32.152183664	-104.269000581
3,600.00	6.49	238.351	3,585.99	-132.78	-215.42	419,085.816	519,900.178	32.152167368	-104.269031697
3,700.00	6.49	238.351	3,685.35	-138.72	-225.05	419,079.883	519,890.552	32.152151073	-104.269062813
3,800.00	6.49	238.351	3,784.71	-144.65	-234.67	419,073.949	519,880.926	32.152134777	-104.269093929
3,900.00	6.49	238.351	3,884.07	-150.58	-244.30	419,068.016	519,871.300	32.152118481	-104.269125045
4,000.00	6.49	238.351	3,983.43	-156.52	-253.93	419,062.082	519,861.673	32.152102186	-104.269156161
4,100.00	6.49	238.351	4,082.79	-162.45	-263.55	419,056.148	519,852.047	32.152085890	-104.269187276
4,200.00	6.49	238.351	4,182.15	-168.39	-273.18	419,050.215	519,842.421	32.152069594	-104.269218392
4,300.00	6.49	238.351	4,281.50	-174.32	-282.81	419,044.281	519,832.794	32.152053298	-104.269249508
4,400.00	6.49	238.351	4,380.86	-180.25	-292.43	419,038.348	519,823.168	32.152037003	-104.269280624
4,500.00	6.49	238.351	4,480.22	-186.19	-302.06	419,032.414	519,813.542	32.152020707	-104.269311740
4,600.00	6.49	238.351	4,579.58	-192.12	-311.69	419,026.481	519,803.915	32.152004411	-104.269342856
4,700.00	6.49	238.351	4,678.94	-198.05	-321.31	419,020.547	519,794.289	32.151988116	-104.269373972
4,800.00	6.49	238.351	4,778.30	-203.99	-330.94	419,014.614	519,784.663	32.151971820	-104.269405088
4,900.00	6.49	238.351	4,877.66	-209.92	-340.56	419,008.680	519,775.037	32.151955524	-104.269436204
5,000.00	6.49	238.351	4,977.01	-215.85	-350.19	419,002.746	519,765.410	32.151939228	-104.269467319

FLAT CREEK
RESOURCES

Planning Report - Geographic

Database:	DT_Aug2923v16	Local Co-ordinate Reference:	Well Jawbone Fed Com LW 15H
Company:	Flat Creek Resources, LLC	TVD Reference:	RKB=3381+26.5 @ 3407.50ft
Project:	Eddy County, New Mexico NAD27 NME	MD Reference:	RKB=3381+26.5 @ 3407.50ft
Site:	Jawbone	North Reference:	Grid
Well:	Jawbone Fed Com LW 15H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
5,100.00	6.49	238.351	5,076.37	-221.79	-359.82	418,996.813	519,755.784	32.151922932	-104.269498435
5,200.00	6.49	238.351	5,175.73	-227.72	-369.44	418,990.879	519,746.158	32.151906637	-104.269529551
5,300.00	6.49	238.351	5,275.09	-233.65	-379.07	418,984.946	519,736.531	32.151890341	-104.269560667
5,400.00	6.49	238.351	5,374.45	-239.59	-388.70	418,979.012	519,726.905	32.151874045	-104.269591783
5,500.00	6.49	238.351	5,473.81	-245.52	-398.32	418,973.079	519,717.279	32.151857749	-104.269622898
5,600.00	6.49	238.351	5,573.17	-251.46	-407.95	418,967.145	519,707.653	32.151841453	-104.269654014
5,700.00	6.49	238.351	5,672.52	-257.39	-417.57	418,961.212	519,698.026	32.151825158	-104.269685130
5,800.00	6.49	238.351	5,771.88	-263.32	-427.20	418,955.278	519,688.400	32.151808862	-104.269716246
5,900.00	6.49	238.351	5,871.24	-269.26	-436.83	418,949.345	519,678.774	32.151792566	-104.269747361
6,000.00	6.49	238.351	5,970.60	-275.19	-446.45	418,943.411	519,669.147	32.151776270	-104.269778477
6,100.00	6.49	238.351	6,069.96	-281.12	-456.08	418,937.477	519,659.521	32.151759974	-104.269809593
6,206.77	6.49	238.351	6,176.05	-287.46	-466.36	418,931.142	519,649.243	32.151742574	-104.269842816
Begin 2°/100' drop									
6,300.00	4.63	238.351	6,268.83	-292.20	-474.05	418,926.402	519,641.553	32.151729557	-104.269867672
6,400.00	2.63	238.351	6,368.63	-295.52	-479.44	418,923.082	519,636.166	32.151720437	-104.269885085
6,500.00	0.63	238.351	6,468.58	-297.01	-481.85	418,921.591	519,633.747	32.151716342	-104.269892904
6,531.42	0.00	0.000	6,500.00	-297.10	-482.00	418,921.500	519,633.600	32.151716094	-104.269893379
Begin vertical hold @ 6500.00 TVD									
6,600.00	0.00	0.000	6,568.58	-297.10	-482.00	418,921.500	519,633.600	32.151716094	-104.269893379
6,700.00	0.00	0.000	6,668.58	-297.10	-482.00	418,921.500	519,633.600	32.151716094	-104.269893379
6,800.00	0.00	0.000	6,768.58	-297.10	-482.00	418,921.500	519,633.600	32.151716094	-104.269893379
6,900.00	0.00	0.000	6,868.58	-297.10	-482.00	418,921.500	519,633.600	32.151716094	-104.269893379
7,000.00	0.00	0.000	6,968.58	-297.10	-482.00	418,921.500	519,633.600	32.151716094	-104.269893379
7,031.42	0.00	0.000	7,000.00	-297.10	-482.00	418,921.500	519,633.600	32.151716094	-104.269893379
7,100.00	0.00	0.000	7,068.58	-297.10	-482.00	418,921.500	519,633.600	32.151716094	-104.269893379
7,163.46	0.00	0.000	7,132.04	-297.10	-482.00	418,921.500	519,633.600	32.151716094	-104.269893379
Begin 10°/100' build									
7,200.00	3.65	0.812	7,168.55	-295.94	-481.98	418,922.665	519,633.617	32.151719295	-104.269893323
7,250.00	8.65	0.812	7,218.25	-290.58	-481.91	418,928.022	519,633.693	32.151734024	-104.269893067
7,300.00	13.65	0.812	7,267.29	-280.91	-481.77	418,937.691	519,633.830	32.151760602	-104.269892606
7,350.00	18.65	0.812	7,315.30	-267.00	-481.57	418,951.596	519,634.027	32.151798827	-104.269891942
7,400.00	23.65	0.812	7,361.92	-248.97	-481.32	418,969.632	519,634.283	32.151848408	-104.269891082
7,450.00	28.65	0.812	7,406.78	-226.94	-481.01	418,991.662	519,634.595	32.151908969	-104.269890031
7,500.00	33.65	0.812	7,449.56	-201.08	-480.64	419,017.518	519,634.962	32.151980047	-104.269888797
7,550.00	38.65	0.812	7,489.92	-171.60	-480.22	419,047.003	519,635.380	32.152061102	-104.269887390
7,600.00	43.65	0.812	7,527.55	-138.71	-479.76	419,079.894	519,635.846	32.152151518	-104.269885821
7,650.00	48.65	0.812	7,562.18	-102.66	-479.24	419,115.939	519,636.357	32.152250606	-104.269884101
7,700.00	53.65	0.812	7,593.53	-63.74	-478.69	419,154.864	519,636.909	32.152357612	-104.269882243
7,750.00	58.65	0.812	7,621.37	-22.23	-478.10	419,196.373	519,637.498	32.152471721	-104.269880262
7,800.00	63.65	0.812	7,645.48	21.55	-477.48	419,240.151	519,638.118	32.152592066	-104.269878173
7,850.00	68.65	0.812	7,665.69	67.26	-476.83	419,285.863	519,638.766	32.152717730	-104.269875992
7,900.00	73.65	0.812	7,681.84	114.56	-476.16	419,333.163	519,639.437	32.152847757	-104.269873735
7,950.00	78.65	0.812	7,693.80	163.09	-475.48	419,381.690	519,640.125	32.152981157	-104.269871420
8,000.00	83.65	0.812	7,701.49	212.47	-474.78	419,431.074	519,640.825	32.153116915	-104.269869063
8,050.00	88.65	0.812	7,704.84	262.34	-474.07	419,480.941	519,641.532	32.153253998	-104.269866683
8,063.46	90.00	0.812	7,705.00	275.80	-473.88	419,494.399	519,641.723	32.153290995	-104.269866041
Begin 90.00° lateral									
8,100.00	90.00	0.812	7,705.00	312.33	-473.36	419,530.934	519,642.241	32.153391430	-104.269864298
8,200.00	90.00	0.812	7,705.00	412.32	-471.94	419,630.924	519,643.659	32.153666302	-104.269859527
8,300.00	90.00	0.812	7,705.00	512.31	-470.52	419,730.914	519,645.076	32.153941174	-104.269854755
8,400.00	90.00	0.812	7,705.00	612.30	-469.11	419,830.904	519,646.494	32.154216046	-104.269849984
8,500.00	90.00	0.812	7,705.00	712.29	-467.69	419,930.893	519,647.912	32.154490918	-104.269845212
8,600.00	90.00	0.812	7,705.00	812.28	-466.27	420,030.883	519,649.329	32.154765790	-104.269840441
8,700.00	90.00	0.812	7,705.00	912.27	-464.85	420,130.873	519,650.747	32.155040662	-104.269835669

FLAT CREEK
RESOURCES

Planning Report - Geographic

Database:	DT_Aug2923v16	Local Co-ordinate Reference:	Well Jawbone Fed Com LW 15H
Company:	Flat Creek Resources, LLC	TVD Reference:	RKB=3381+26.5 @ 3407.50ft
Project:	Eddy County, New Mexico NAD27 NME	MD Reference:	RKB=3381+26.5 @ 3407.50ft
Site:	Jawbone	North Reference:	Grid
Well:	Jawbone Fed Com LW 15H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev1		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude		Longitude
8,800.00	90.00	0.812	7,705.00	1,012.26	-463.44	420,230.863	519,652.165	32.155315534		-104.269830898
8,900.00	90.00	0.812	7,705.00	1,112.25	-462.02	420,330.852	519,653.582	32.155590406		-104.269826126
9,000.00	90.00	0.812	7,705.00	1,212.24	-460.60	420,430.842	519,655.000	32.155865278		-104.269821354
9,100.00	90.00	0.812	7,705.00	1,312.23	-459.18	420,530.832	519,656.418	32.156140150		-104.269816583
9,200.00	90.00	0.812	7,705.00	1,412.22	-457.77	420,630.822	519,657.836	32.156415022		-104.269811811
9,300.00	90.00	0.812	7,705.00	1,512.21	-456.35	420,730.811	519,659.253	32.156689894		-104.269807039
9,400.00	90.00	0.812	7,705.00	1,612.20	-454.93	420,830.801	519,660.671	32.156964765		-104.269802268
9,500.00	90.00	0.812	7,705.00	1,712.19	-453.51	420,930.791	519,662.089	32.157239637		-104.269797496
9,600.00	90.00	0.812	7,705.00	1,812.18	-452.09	421,030.781	519,663.506	32.157514509		-104.269792724
9,700.00	90.00	0.812	7,705.00	1,912.17	-450.68	421,130.770	519,664.924	32.157789381		-104.269787952
9,800.00	90.00	0.812	7,705.00	2,012.16	-449.26	421,230.760	519,666.342	32.158064253		-104.269783181
9,900.00	90.00	0.812	7,705.00	2,112.15	-447.84	421,330.750	519,667.759	32.158339124		-104.269778409
10,000.00	90.00	0.812	7,705.00	2,212.14	-446.42	421,430.740	519,669.177	32.158613995		-104.269773637
10,100.00	90.00	0.812	7,705.00	2,312.13	-445.01	421,530.729	519,670.595	32.158888867		-104.269768865
10,200.00	90.00	0.812	7,705.00	2,412.12	-443.59	421,630.719	519,672.012	32.159163739		-104.269764093
10,300.00	90.00	0.812	7,705.00	2,512.11	-442.17	421,730.709	519,673.430	32.159438611		-104.269759321
10,400.00	90.00	0.812	7,705.00	2,612.10	-440.75	421,830.699	519,674.848	32.159713482		-104.269754549
10,500.00	90.00	0.812	7,705.00	2,712.09	-439.34	421,930.688	519,676.265	32.159988354		-104.269749777
10,600.00	90.00	0.812	7,705.00	2,812.08	-437.92	422,030.678	519,677.683	32.160263226		-104.269745005
10,700.00	90.00	0.812	7,705.00	2,912.07	-436.50	422,130.668	519,679.101	32.160538097		-104.269740232
10,800.00	90.00	0.812	7,705.00	3,012.06	-435.08	422,230.657	519,680.518	32.160812969		-104.269735460
10,900.00	90.00	0.812	7,705.00	3,112.05	-433.67	422,330.647	519,681.936	32.161087841		-104.269730688
11,000.00	90.00	0.812	7,705.00	3,212.04	-432.25	422,430.637	519,683.354	32.161362712		-104.269725916
11,100.00	90.00	0.812	7,705.00	3,312.03	-430.83	422,530.627	519,684.771	32.161637584		-104.269721144
11,200.00	90.00	0.812	7,705.00	3,412.02	-429.41	422,630.616	519,686.189	32.161912456		-104.269716371
11,300.00	90.00	0.812	7,705.00	3,512.01	-427.99	422,730.606	519,687.607	32.162187327		-104.269711599
11,400.00	90.00	0.812	7,705.00	3,612.00	-426.58	422,830.596	519,689.025	32.162462199		-104.269706827
11,500.00	90.00	0.812	7,705.00	3,711.99	-425.16	422,930.586	519,690.442	32.162737071		-104.269702054
11,600.00	90.00	0.812	7,705.00	3,811.98	-423.74	423,030.575	519,691.860	32.163011942		-104.269697282
11,700.00	90.00	0.812	7,705.00	3,911.97	-422.32	423,130.565	519,693.278	32.163286814		-104.269692510
11,800.00	90.00	0.812	7,705.00	4,011.96	-420.91	423,230.555	519,694.695	32.163561685		-104.269687737
11,900.00	90.00	0.812	7,705.00	4,111.95	-419.49	423,330.545	519,696.113	32.163836557		-104.269682965
12,000.00	90.00	0.812	7,705.00	4,211.94	-418.07	423,430.534	519,697.531	32.164111428		-104.269678192
12,100.00	90.00	0.812	7,705.00	4,311.93	-416.65	423,530.524	519,698.948	32.164386300		-104.269673420
12,200.00	90.00	0.812	7,705.00	4,411.92	-415.24	423,630.514	519,700.366	32.164661171		-104.269668647
12,300.00	90.00	0.812	7,705.00	4,511.91	-413.82	423,730.504	519,701.784	32.164936043		-104.269663874
12,400.00	90.00	0.812	7,705.00	4,611.90	-412.40	423,830.493	519,703.201	32.165210914		-104.269659102
12,500.00	90.00	0.812	7,705.00	4,711.89	-410.98	423,930.483	519,704.619	32.165485786		-104.269654329
12,600.00	90.00	0.812	7,705.00	4,811.88	-409.56	424,030.473	519,706.037	32.165760657		-104.269649556
12,700.00	90.00	0.812	7,705.00	4,911.87	-408.15	424,130.463	519,707.454	32.166035529		-104.269644784
12,800.00	90.00	0.812	7,705.00	5,011.86	-406.73	424,230.452	519,708.872	32.166310400		-104.269640011
12,900.00	90.00	0.812	7,705.00	5,111.85	-405.31	424,330.442	519,710.290	32.166585272		-104.269635238
13,000.00	90.00	0.812	7,705.00	5,211.84	-403.89	424,430.432	519,711.707	32.166860143		-104.269630465
13,100.00	90.00	0.812	7,705.00	5,311.83	-402.48	424,530.422	519,713.125	32.167135014		-104.269625693
13,200.00	90.00	0.812	7,705.00	5,411.82	-401.06	424,630.411	519,714.543	32.167409886		-104.269620920
13,300.00	90.00	0.812	7,705.00	5,511.81	-399.64	424,730.401	519,715.960	32.167684757		-104.269616147
13,400.00	90.00	0.812	7,705.00	5,611.80	-398.22	424,830.391	519,717.378	32.167959629		-104.269611374
13,500.00	90.00	0.812	7,705.00	5,711.79	-396.81	424,930.381	519,718.796	32.168234500		-104.269606601
13,600.00	90.00	0.812	7,705.00	5,811.78	-395.39	425,030.370	519,720.213	32.168509371		-104.269601828
13,700.00	90.00	0.812	7,705.00	5,911.77	-393.97	425,130.360	519,721.631	32.168784243		-104.269597055
13,800.00	90.00	0.812	7,705.00	6,011.76	-392.55	425,230.350	519,723.049	32.169059114		-104.269592282
13,900.00	90.00	0.812	7,705.00	6,111.75	-391.13	425,330.340	519,724.467	32.169333985		-104.269587509
14,000.00	90.00	0.812	7,705.00	6,211.74	-389.72	425,430.329	519,725.884	32.169608857		-104.269582736
14,100.00	90.00	0.812	7,705.00	6,311.73	-388.30	425,530.319	519,727.302	32.169883728		-104.269577962
14,200.00	90.00	0.812	7,705.00	6,411.72	-386.88	425,630.309	519,728.720	32.170158599		-104.269573189

FLAT CREEK
RESOURCES

Planning Report - Geographic

Database:	DT_Aug2923v16	Local Co-ordinate Reference:	Well Jawbone Fed Com LW 15H
Company:	Flat Creek Resources, LLC	TVD Reference:	RKB=3381+26.5 @ 3407.50ft
Project:	Eddy County, New Mexico NAD27 NME	MD Reference:	RKB=3381+26.5 @ 3407.50ft
Site:	Jawbone	North Reference:	Grid
Well:	Jawbone Fed Com LW 15H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev1		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
14,300.00	90.00	0.812	7,705.00	6,511.71	-385.46	425,730.299	519,730.137	32.170433470	-104.269568416	
14,400.00	90.00	0.812	7,705.00	6,611.70	-384.05	425,830.288	519,731.555	32.170708342	-104.269563643	
14,500.00	90.00	0.812	7,705.00	6,711.69	-382.63	425,930.278	519,732.973	32.170983213	-104.269558870	
14,600.00	90.00	0.812	7,705.00	6,811.68	-381.21	426,030.268	519,734.390	32.171258084	-104.269554096	
14,700.00	90.00	0.812	7,705.00	6,911.67	-379.79	426,130.258	519,735.808	32.171532955	-104.269549323	
14,800.00	90.00	0.812	7,705.00	7,011.66	-378.38	426,230.247	519,737.226	32.171807826	-104.269544550	
14,900.00	90.00	0.812	7,705.00	7,111.65	-376.96	426,330.237	519,738.643	32.172082698	-104.269539776	
15,000.00	90.00	0.812	7,705.00	7,211.64	-375.54	426,430.227	519,740.061	32.172357569	-104.269535003	
15,100.00	90.00	0.812	7,705.00	7,311.63	-374.12	426,530.217	519,741.479	32.172632440	-104.269530229	
15,200.00	90.00	0.812	7,705.00	7,411.62	-372.70	426,630.206	519,742.896	32.172907311	-104.269525456	
15,300.00	90.00	0.812	7,705.00	7,511.61	-371.29	426,730.196	519,744.314	32.173182182	-104.269520682	
15,400.00	90.00	0.812	7,705.00	7,611.60	-369.87	426,830.186	519,745.732	32.173457053	-104.269515909	
15,500.00	90.00	0.812	7,705.00	7,711.59	-368.45	426,930.176	519,747.149	32.173731924	-104.269511135	
15,600.00	90.00	0.812	7,705.00	7,811.58	-367.03	427,030.165	519,748.567	32.174006796	-104.269506362	
15,700.00	90.00	0.812	7,705.00	7,911.57	-365.62	427,130.155	519,749.985	32.174281667	-104.269501588	
15,800.00	90.00	0.812	7,705.00	8,011.56	-364.20	427,230.145	519,751.402	32.174556538	-104.269496814	
15,900.00	90.00	0.812	7,705.00	8,111.55	-362.78	427,330.135	519,752.820	32.174831409	-104.269492041	
16,000.00	90.00	0.812	7,705.00	8,211.54	-361.36	427,430.124	519,754.238	32.175106280	-104.269487267	
16,100.00	90.00	0.812	7,705.00	8,311.53	-359.95	427,530.114	519,755.655	32.175381151	-104.269482493	
16,200.00	90.00	0.812	7,705.00	8,411.52	-358.53	427,630.104	519,757.073	32.175656022	-104.269477719	
16,300.00	90.00	0.812	7,705.00	8,511.51	-357.11	427,730.094	519,758.491	32.175930893	-104.269472946	
16,400.00	90.00	0.812	7,705.00	8,611.50	-355.69	427,830.083	519,759.909	32.176205764	-104.269468172	
16,500.00	90.00	0.812	7,705.00	8,711.49	-354.27	427,930.073	519,761.326	32.176480635	-104.269463398	
16,600.00	90.00	0.812	7,705.00	8,811.48	-352.86	428,030.063	519,762.744	32.176755506	-104.269458624	
16,700.00	90.00	0.812	7,705.00	8,911.47	-351.44	428,130.052	519,764.162	32.177030377	-104.269453850	
16,800.00	90.00	0.812	7,705.00	9,011.46	-350.02	428,230.042	519,765.579	32.177305248	-104.269449076	
16,900.00	90.00	0.812	7,705.00	9,111.45	-348.60	428,330.032	519,766.997	32.177580119	-104.269444302	
17,000.00	90.00	0.812	7,705.00	9,211.44	-347.19	428,430.022	519,768.415	32.177854990	-104.269439528	
17,100.00	90.00	0.812	7,705.00	9,311.43	-345.77	428,530.011	519,769.832	32.178129860	-104.269434754	
17,200.00	90.00	0.812	7,705.00	9,411.42	-344.35	428,630.001	519,771.250	32.178404731	-104.269429980	
17,300.00	90.00	0.812	7,705.00	9,511.41	-342.93	428,729.991	519,772.668	32.178679602	-104.269425206	
17,400.00	90.00	0.812	7,705.00	9,611.40	-341.52	428,829.981	519,774.085	32.178954473	-104.269420432	
17,500.00	90.00	0.812	7,705.00	9,711.39	-340.10	428,929.970	519,775.503	32.179229344	-104.269415658	
17,600.00	90.00	0.812	7,705.00	9,811.38	-338.68	429,029.960	519,776.921	32.179504215	-104.269410883	
17,700.00	90.00	0.812	7,705.00	9,911.37	-337.26	429,129.950	519,778.338	32.179779086	-104.269406109	
17,800.00	90.00	0.812	7,705.00	10,011.36	-335.84	429,229.940	519,779.756	32.180053956	-104.269401335	
17,900.00	90.00	0.812	7,705.00	10,111.35	-334.43	429,329.929	519,781.174	32.180328827	-104.269396561	
18,000.00	90.00	0.812	7,705.00	10,211.34	-333.01	429,429.919	519,782.591	32.180603698	-104.269391786	
18,028.18	90.00	0.812	7,705.00	10,239.52	-332.61	429,458.100	519,782.991	32.180681166	-104.269390441	
LTP @ 18028.18 MD 7705.00 TVD										
18,078.19	90.00	0.812	7,705.00	10,289.52	-331.90	429,508.100	519,783.700	32.180818615	-104.269388053	
PBHL/TD @ 18078.19 MD 7705.00 TVD										

FLAT CREEK
RESOURCES

Planning Report - Geographic

Database:	DT_Aug2923v16	Local Co-ordinate Reference:	Well Jawbone Fed Com LW 15H
Company:	Flat Creek Resources, LLC	TVD Reference:	RKB=3381+26.5 @ 3407.50ft
Project:	Eddy County, New Mexico NAD27 NME	MD Reference:	RKB=3381+26.5 @ 3407.50ft
Site:	Jawbone	North Reference:	Grid
Well:	Jawbone Fed Com LW 15H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev1		

Design Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(ft)	(ft)	(ft)	(usft)	(usft)		
Jawbone 03 FTP 100 FS - plan hits target center - Rectangle (sides W660.00 H10,537.68 D0.00)	0.00	0.812	7,000.00	-297.10	-482.00	418,921.500	519,633.600	32.151716094	-104.269893379
Jawbone 03 BHL 50 FNI - plan hits target center - Point	0.00	0.000	7,705.00	10,289.52	-331.90	429,508.100	519,783.700	32.180818615	-104.269388052
Jawbone 03 LTP 100 FN - plan misses target center by 0.31ft at 18028.18ft MD (7705.00 TVD, 10239.52 N, -332.61 E) - Point	0.00	0.000	7,705.00	10,239.52	-332.30	429,458.100	519,783.300	32.180681165	-104.269389441

Plan Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(ft)	(ft)	+N/-S (ft)	+E/-W (ft)	
1,200.00	1,200.00	0.00	0.00	KOP Begin 2°/100' build
1,524.65	1,523.95	-9.64	-15.64	Begin 6.49° tangent
6,206.77	6,176.05	-287.46	-466.36	Begin 2°/100' drop
6,531.42	6,500.00	-297.10	-482.00	Begin vertical hold @ 6500.00 TVD
7,031.42	7,000.00	-297.10	-482.00	
7,163.46	7,132.04	-297.10	-482.00	Begin 10°/100' build
8,063.46	7,705.00	275.80	-473.88	Begin 90.00° lateral
18,028.18	7,705.00	10,239.52	-332.61	LTP @ 18028.18 MD 7705.00 TVD
18,078.19	7,705.00	10,289.52	-331.90	PBHL/TD @ 18078.19 MD 7705.00 TVD

FLAT CREEK
RESOURCES

Anticollision Report

Company:	Flat Creek Resources, LLC	Local Co-ordinate Reference:	Well Jawbone Fed Com LW 15H
Project:	Eddy County, New Mexico NAD27 NME	TVD Reference:	RKB=3381+26.5 @ 3407.50ft
Reference Site:	Jawbone	MD Reference:	RKB=3381+26.5 @ 3407.50ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Jawbone Fed Com LW 15H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DT_Aug2923v16
Reference Design:	rev1	Offset TVD Reference:	Offset Datum

Reference	rev1		
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 2,007.82ft	Error Surface:	Pedal Curve
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program		Date	9/6/2023		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.00	18,078.19	rev1 (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						
Jawbone						
Jawbone Fed Com LW 16H - Original Hole - rev1	1,000.00	999.00	20.03	12.60	2.697	CC, ES, SF

Offset Design: Jawbone - Jawbone Fed Com LW 16H - Original Hole - rev1													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		
0.00	0.00	0.00	0.00	0.00	0.00	-147.02	-16.80	-10.90	20.05					
100.00	100.00	99.00	99.00	0.42	0.41	-147.02	-16.80	-10.90	20.03	19.19	0.83	24.030		
200.00	200.00	199.00	199.00	1.25	1.24	-147.02	-16.80	-10.90	20.03	17.54	2.49	8.055		
300.00	300.00	299.00	299.00	1.74	1.74	-147.02	-16.80	-10.90	20.03	16.54	3.48	5.753		
400.00	400.00	399.00	399.00	2.13	2.13	-147.02	-16.80	-10.90	20.03	15.77	4.26	4.706		
500.00	500.00	499.00	499.00	2.46	2.46	-147.02	-16.80	-10.90	20.03	15.11	4.91	4.076		
600.00	600.00	599.00	599.00	2.75	2.75	-147.02	-16.80	-10.90	20.03	14.53	5.50	3.642		
700.00	700.00	699.00	699.00	3.02	3.01	-147.02	-16.80	-10.90	20.03	13.99	6.03	3.320		
800.00	800.00	799.00	799.00	3.26	3.26	-147.02	-16.80	-10.90	20.03	13.50	6.53	3.069		
900.00	900.00	899.00	899.00	3.50	3.49	-147.02	-16.80	-10.90	20.03	13.04	6.99	2.866		
1,000.00	1,000.00	999.00	999.00	3.71	3.71	-147.02	-16.80	-10.90	20.03	12.60	7.43	2.697	CC, ES, SF	
1,100.00	1,100.00	1,098.38	1,098.36	3.92	4.01	-144.59	-17.50	-12.44	21.48	13.61	7.87	2.729		
1,200.00	1,200.00	1,197.52	1,197.37	4.12	4.76	-138.90	-19.60	-17.10	26.07	17.33	8.73	2.985		
1,300.00	1,299.98	1,296.35	1,295.82	4.39	5.43	-11.84	-23.11	-24.86	32.38	22.73	9.65	3.356		
1,400.00	1,399.84	1,394.94	1,393.69	5.09	6.06	-7.60	-27.99	-35.67	38.76	27.78	10.98	3.529		
1,500.00	1,499.45	1,494.04	1,491.66	5.73	6.29	-4.12	-34.13	-49.24	44.77	32.88	11.88	3.767		
1,600.00	1,598.82	1,593.93	1,590.36	5.89	6.52	-1.46	-40.49	-63.32	48.84	36.54	12.30	3.971		
1,700.00	1,698.18	1,693.83	1,689.05	6.09	6.78	0.79	-46.85	-77.40	52.90	40.11	12.79	4.135		
1,800.00	1,797.54	1,793.73	1,787.75	6.33	7.05	2.71	-53.22	-91.48	57.03	43.70	13.33	4.279		
1,900.00	1,896.90	1,893.63	1,886.44	6.58	7.35	4.38	-59.58	-105.55	61.21	47.32	13.89	4.408		
2,000.00	1,996.26	1,993.53	1,985.14	6.85	7.66	5.83	-65.94	-119.63	65.44	50.97	14.47	4.522		
2,100.00	2,095.62	2,093.42	2,083.84	7.13	7.98	7.10	-72.30	-133.71	69.71	54.62	15.08	4.622		
2,200.00	2,194.97	2,193.32	2,182.53	7.43	8.31	8.23	-78.67	-147.79	74.00	58.29	15.71	4.711		
2,300.00	2,294.33	2,293.22	2,281.23	7.73	8.65	9.23	-85.03	-161.87	78.32	61.97	16.36	4.789		
2,400.00	2,393.69	2,393.12	2,379.92	8.05	9.01	10.13	-91.39	-175.95	82.66	65.65	17.02	4.857		
2,500.00	2,493.05	2,493.01	2,478.62	8.37	9.37	10.94	-97.75	-190.02	87.03	69.33	17.70	4.918		

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 Jawbone Fed Com LW 15H
Project:	Eddy County, New Mexico NAD27 NME	TVD Reference:	RKB=3381+26.5 @ 3407.50ft
Reference Site:	Jawbone	MD Reference:	RKB=3381+26.5 @ 3407.50ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Jawbone Fed Com LW 15H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DT_Aug2923v16
Reference Design:	rev1	Offset TVD Reference:	Offset Datum

Offset Design: Jawbone - Jawbone Fed Com LW 16H - Original Hole - rev1													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)			
2,600.00	2,592.41	2,592.91	2,577.31	8.70	9.73	11.67	-104.12	-204.10	91.40	73.02	18.38	4.972	
2,700.00	2,691.77	2,692.81	2,676.01	9.04	10.10	12.33	-110.48	-218.18	95.79	76.71	19.09	5.019	
2,800.00	2,791.13	2,792.71	2,774.71	9.38	10.48	12.94	-116.84	-232.26	100.19	80.40	19.80	5.061	
2,900.00	2,890.48	2,892.61	2,873.40	9.73	10.87	13.49	-123.20	-246.34	104.60	84.09	20.51	5.099	
3,000.00	2,989.84	2,992.50	2,972.10	10.08	11.25	14.00	-129.57	-260.41	109.03	87.78	21.24	5.133	
3,100.00	3,089.20	3,092.40	3,070.79	10.44	11.64	14.47	-135.93	-274.49	113.45	91.48	21.98	5.163	
3,200.00	3,188.56	3,192.30	3,169.49	10.81	12.04	14.90	-142.29	-288.57	117.89	95.17	22.72	5.190	
3,300.00	3,287.92	3,292.20	3,268.19	11.17	12.44	15.31	-148.65	-302.65	122.33	98.87	23.46	5.214	
3,400.00	3,387.28	3,392.09	3,366.88	11.54	12.84	15.68	-155.02	-316.73	126.78	102.56	24.21	5.236	
3,500.00	3,486.64	3,491.99	3,465.58	11.91	13.24	16.03	-161.38	-330.80	131.23	106.26	24.97	5.255	
3,600.00	3,585.99	3,591.89	3,564.27	12.29	13.65	16.36	-167.74	-344.88	135.69	109.96	25.73	5.273	
3,700.00	3,685.35	3,691.79	3,662.97	12.66	14.06	16.66	-174.10	-358.96	140.15	113.65	26.49	5.290	
3,800.00	3,784.71	3,791.69	3,761.67	13.04	14.47	16.95	-180.47	-373.04	144.61	117.35	27.26	5.305	
3,900.00	3,884.07	3,891.58	3,860.36	13.42	14.88	17.22	-186.83	-387.12	149.08	121.05	28.03	5.318	
4,000.00	3,983.43	3,991.48	3,959.06	13.80	15.30	17.47	-193.19	-401.20	153.55	124.75	28.81	5.331	
4,100.00	4,082.79	4,091.38	4,057.75	14.19	15.71	17.71	-199.55	-415.27	158.03	128.45	29.58	5.342	
4,200.00	4,182.15	4,191.28	4,156.45	14.58	16.13	17.94	-205.92	-429.35	162.51	132.14	30.36	5.352	
4,300.00	4,281.50	4,291.17	4,255.15	14.96	16.55	18.15	-212.28	-443.43	166.98	135.84	31.14	5.362	
4,400.00	4,380.86	4,391.07	4,353.84	15.35	16.97	18.35	-218.64	-457.51	171.47	139.54	31.93	5.371	
4,500.00	4,480.22	4,490.97	4,452.54	15.74	17.39	18.55	-225.00	-471.59	175.95	143.24	32.71	5.379	
4,600.00	4,579.58	4,590.87	4,551.23	16.13	17.82	18.73	-231.37	-485.66	180.43	146.94	33.50	5.386	
4,700.00	4,678.94	4,690.76	4,649.93	16.52	18.24	18.90	-237.73	-499.74	184.92	150.64	34.29	5.393	
4,800.00	4,778.30	4,790.66	4,748.62	16.92	18.66	19.07	-244.09	-513.82	189.41	154.33	35.08	5.400	
4,900.00	4,877.66	4,890.56	4,847.32	17.31	19.09	19.23	-250.45	-527.90	193.90	158.03	35.87	5.406	
5,000.00	4,977.01	4,990.46	4,946.02	17.71	19.52	19.38	-256.81	-541.98	198.39	161.73	36.66	5.412	
5,100.00	5,076.37	5,090.36	5,044.71	18.10	19.94	19.52	-263.18	-556.05	202.89	165.43	37.45	5.417	
5,200.00	5,175.73	5,190.25	5,143.41	18.50	20.37	19.66	-269.54	-570.13	207.38	169.13	38.25	5.422	
5,300.00	5,275.09	5,290.15	5,242.10	18.90	20.80	19.79	-275.90	-584.21	211.87	172.83	39.05	5.426	
5,400.00	5,374.45	5,390.05	5,340.80	19.30	21.23	19.92	-282.26	-598.29	216.37	176.53	39.85	5.430	
5,500.00	5,473.81	5,496.71	5,446.38	19.69	21.71	20.13	-288.48	-612.04	219.58	178.89	40.69	5.396	
5,600.00	5,573.17	5,604.76	5,553.83	20.09	22.25	20.58	-293.14	-622.35	219.18	177.65	41.53	5.278	
5,700.00	5,672.52	5,712.60	5,661.42	20.49	22.75	21.28	-296.12	-628.95	215.13	172.89	42.23	5.094	
5,800.00	5,771.88	5,819.92	5,768.69	20.89	23.13	22.29	-297.43	-631.85	207.48	164.74	42.73	4.855	
5,900.00	5,871.24	5,921.47	5,870.24	21.29	23.18	23.55	-297.50	-632.00	197.21	154.27	42.94	4.593	
6,000.00	5,970.60	6,023.40	5,972.02	21.70	23.15	26.10	-293.80	-631.95	186.44	143.61	42.83	4.353	
6,100.00	6,069.96	6,121.17	6,067.75	22.10	23.05	33.95	-274.50	-631.68	175.72	134.01	41.71	4.213	
6,179.54	6,148.99	6,191.48	6,133.86	22.42	22.98	43.31	-250.70	-631.34	171.83	131.95	39.88	4.309	
6,200.00	6,169.32	6,208.33	6,149.24	22.50	22.96	45.96	-243.80	-631.24	172.15	132.91	39.25	4.386	
6,300.00	6,268.83	6,283.69	6,215.24	22.92	22.88	58.94	-207.55	-630.73	185.68	150.06	35.63	5.212	
6,400.00	6,368.63	6,350.00	6,268.96	23.37	22.83	70.49	-168.74	-630.18	220.30	188.04	32.26	6.829	
6,500.00	6,468.58	6,400.00	6,306.29	23.76	22.81	78.72	-135.51	-629.71	271.95	241.96	29.99	9.067	
6,600.00	6,568.58	6,450.00	6,340.59	23.81	22.80	-36.63	-99.15	-629.19	335.22	306.59	28.63	11.710	
6,700.00	6,668.58	6,489.56	6,365.40	23.83	22.82	-32.68	-68.35	-628.75	406.42	378.63	27.79	14.627	
6,800.00	6,768.58	6,522.88	6,384.60	23.86	22.84	-29.76	-41.13	-628.37	483.33	456.08	27.26	17.731	
6,900.00	6,868.58	6,550.00	6,399.05	23.89	22.87	-27.64	-18.18	-628.04	564.49	537.55	26.94	20.954	
7,000.00	6,968.58	6,575.53	6,411.64	23.92	22.90	-25.82	4.02	-627.73	648.83	622.04	26.79	24.220	
7,100.00	7,068.58	6,600.00	6,422.77	23.93	22.94	-24.24	25.81	-627.42	735.66	708.90	26.77	27.484	
7,200.00	7,168.55	6,615.22	6,429.22	23.91	22.97	-21.55	39.60	-627.22	823.91	797.18	26.73	30.828	
7,300.00	7,267.29	6,650.00	6,442.56	23.81	23.05	-15.66	71.71	-626.77	907.69	880.59	27.10	33.495	
7,400.00	7,361.92	6,650.00	6,442.56	23.69	23.05	-12.80	71.71	-626.77	983.55	956.37	27.18	36.184	
7,500.00	7,449.56	6,700.00	6,458.28	23.56	23.18	-10.44	119.15	-626.10	1,050.89	1,022.94	27.95	37.596	
7,600.00	7,527.55	6,700.00	6,458.28	23.46	23.18	-9.23	119.15	-626.10	1,108.66	1,080.34	28.32	39.147	

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 Jawbone Fed Com LW 15H
Project:	Eddy County, New Mexico NAD27 NME	TVD Reference:	RKB=3381+26.5 @ 3407.50ft
Reference Site:	Jawbone	MD Reference:	RKB=3381+26.5 @ 3407.50ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Jawbone Fed Com LW 15H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DT_Aug2923v16
Reference Design:	rev1	Offset TVD Reference:	Offset Datum

Offset Design:		Jawbone - Jawbone Fed Com LW 16H - Original Hole - rev1											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			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)	Minimum Separation (ft)					
7,700.00	7,593.53	6,750.00	6,469.80	23.43	23.36	-8.20	167.78	-625.41	1,155.70	1,126.36	29.34	39.386				
7,800.00	7,645.48	6,775.83	6,474.08	23.49	23.46	-7.60	193.25	-625.04	1,192.10	1,161.84	30.26	39.395				
7,900.00	7,681.84	6,800.00	6,477.04	23.65	23.56	-7.22	217.24	-624.70	1,217.27	1,185.97	31.30	38.893				
8,000.00	7,701.49	6,850.00	6,479.94	23.95	23.80	-7.01	267.13	-624.00	1,230.85	1,198.20	32.65	37.694				
8,100.00	7,705.00	6,897.34	6,480.00	24.38	24.05	-6.99	314.46	-623.33	1,233.15	1,199.57	33.59	36.713				
8,200.00	7,705.00	6,997.34	6,480.00	24.89	24.65	-6.99	414.45	-621.91	1,233.15	1,198.69	34.46	35.781				
8,300.00	7,705.00	7,097.34	6,480.00	25.48	25.32	-6.99	514.44	-620.49	1,233.15	1,197.76	35.40	34.835				
8,400.00	7,705.00	7,197.34	6,480.00	26.15	26.06	-6.99	614.43	-619.07	1,233.15	1,196.77	36.38	33.894				
8,500.00	7,705.00	7,297.34	6,480.00	26.88	26.87	-6.99	714.42	-617.66	1,233.15	1,195.75	37.41	32.964				
8,600.00	7,705.00	7,397.34	6,480.00	27.69	27.74	-6.99	814.41	-616.24	1,233.15	1,194.68	38.47	32.051				
8,700.00	7,705.00	7,497.34	6,480.00	28.56	28.67	-6.99	914.40	-614.82	1,233.15	1,193.58	39.58	31.158				
8,800.00	7,705.00	7,597.34	6,480.00	29.49	29.65	-6.99	1,014.39	-613.41	1,233.15	1,192.44	40.71	30.289				
8,900.00	7,705.00	7,697.34	6,480.00	30.48	30.69	-6.99	1,114.38	-611.99	1,233.16	1,191.27	41.88	29.445				
9,000.00	7,705.00	7,797.34	6,480.00	31.52	31.77	-6.99	1,214.37	-610.57	1,233.16	1,190.08	43.08	28.628				
9,100.00	7,705.00	7,897.34	6,480.00	32.62	32.90	-6.99	1,314.36	-609.15	1,233.16	1,188.86	44.30	27.838				
9,200.00	7,705.00	7,997.34	6,480.00	33.76	34.06	-6.99	1,414.35	-607.74	1,233.16	1,187.61	45.54	27.077				
9,300.00	7,705.00	8,097.34	6,480.00	34.94	35.27	-6.99	1,514.34	-606.32	1,233.16	1,186.35	46.81	26.344				
9,400.00	7,705.00	8,197.34	6,480.00	36.16	36.50	-6.99	1,614.33	-604.90	1,233.16	1,185.06	48.10	25.639				
9,500.00	7,705.00	8,297.34	6,480.00	37.41	37.77	-6.99	1,714.32	-603.48	1,233.16	1,183.75	49.40	24.961				
9,600.00	7,705.00	8,397.34	6,480.00	38.70	39.07	-6.99	1,814.31	-602.07	1,233.16	1,182.43	50.73	24.309				
9,700.00	7,705.00	8,497.34	6,480.00	40.01	40.39	-6.99	1,914.30	-600.65	1,233.16	1,181.09	52.07	23.684				
9,800.00	7,705.00	8,597.34	6,480.00	41.35	41.73	-6.99	2,014.29	-599.23	1,233.16	1,179.73	53.42	23.083				
9,900.00	7,705.00	8,697.34	6,480.00	42.71	43.10	-6.99	2,114.28	-597.81	1,233.16	1,178.37	54.79	22.507				
10,000.00	7,705.00	8,797.34	6,480.00	44.09	44.48	-6.99	2,214.27	-596.40	1,233.16	1,176.98	56.17	21.954				
10,100.00	7,705.00	8,897.34	6,480.00	45.49	45.89	-6.99	2,314.26	-594.98	1,233.16	1,175.59	57.56	21.422				
10,200.00	7,705.00	8,997.34	6,480.00	46.91	47.30	-6.99	2,414.25	-593.56	1,233.16	1,174.19	58.97	20.912				
10,300.00	7,705.00	9,097.34	6,480.00	48.34	48.74	-6.99	2,514.24	-592.14	1,233.16	1,172.77	60.38	20.423				
10,400.00	7,705.00	9,197.34	6,480.00	49.79	50.18	-6.99	2,614.23	-590.73	1,233.16	1,171.35	61.80	19.952				
10,500.00	7,705.00	9,297.34	6,480.00	51.25	51.64	-6.99	2,714.22	-589.31	1,233.16	1,169.92	63.24	19.501				
10,600.00	7,705.00	9,397.34	6,480.00	52.72	53.11	-6.99	2,814.21	-587.89	1,233.16	1,168.48	64.68	19.066				
10,700.00	7,705.00	9,497.34	6,480.00	54.21	54.59	-6.99	2,914.20	-586.48	1,233.16	1,167.03	66.13	18.649				
10,800.00	7,705.00	9,597.34	6,480.00	55.70	56.08	-6.99	3,014.19	-585.06	1,233.16	1,165.57	67.58	18.247				
10,900.00	7,705.00	9,697.34	6,480.00	57.20	57.58	-6.99	3,114.18	-583.64	1,233.16	1,164.11	69.04	17.861				
11,000.00	7,705.00	9,797.34	6,480.00	58.71	59.09	-6.99	3,214.17	-582.22	1,233.16	1,162.64	70.51	17.489				
11,100.00	7,705.00	9,897.34	6,480.00	60.23	60.60	-6.99	3,314.16	-580.81	1,233.16	1,161.17	71.99	17.130				
11,200.00	7,705.00	9,997.34	6,480.00	61.75	62.12	-6.99	3,414.15	-579.39	1,233.16	1,159.69	73.47	16.785				
11,300.00	7,705.00	10,097.34	6,480.00	63.29	63.65	-6.99	3,514.14	-577.97	1,233.16	1,158.20	74.95	16.453				
11,400.00	7,705.00	10,197.34	6,480.00	64.82	65.19	-6.99	3,614.13	-576.55	1,233.16	1,156.71	76.44	16.132				
11,500.00	7,705.00	10,297.34	6,480.00	66.37	66.73	-6.99	3,714.12	-575.14	1,233.16	1,155.22	77.94	15.822				
11,600.00	7,705.00	10,397.34	6,480.00	67.92	68.27	-6.99	3,814.11	-573.72	1,233.16	1,153.72	79.44	15.524				
11,700.00	7,705.00	10,497.34	6,480.00	69.47	69.82	-6.99	3,914.10	-572.30	1,233.16	1,152.22	80.94	15.235				
11,800.00	7,705.00	10,597.34	6,480.00	71.03	71.38	-6.99	4,014.09	-570.88	1,233.16	1,150.71	82.45	14.957				
11,900.00	7,705.00	10,697.34	6,480.00	72.59	72.93	-6.99	4,114.08	-569.47	1,233.16	1,149.20	83.96	14.687				
12,000.00	7,705.00	10,797.34	6,480.00	74.16	74.50	-6.99	4,214.07	-568.05	1,233.16	1,147.68	85.47	14.427				
12,100.00	7,705.00	10,897.34	6,480.00	75.73	76.06	-6.99	4,314.06	-566.63	1,233.16	1,146.16	86.99	14.175				
12,200.00	7,705.00	10,997.34	6,480.00	77.30	77.63	-6.99	4,414.05	-565.21	1,233.16	1,144.64	88.51	13.932				
12,300.00	7,705.00	11,097.34	6,480.00	78.88	79.21	-6.99	4,514.04	-563.80	1,233.16	1,143.12	90.04	13.696				
12,400.00	7,705.00	11,197.34	6,480.00	80.46	80.78	-6.99	4,614.03	-562.38	1,233.16	1,141.59	91.57	13.467				
12,500.00	7,705.00	11,297.34	6,480.00	82.04	82.36	-6.99	4,714.02	-560.96	1,233.16	1,140.06	93.10	13.246				
12,600.00	7,705.00	11,397.34	6,480.00	83.62	83.94	-6.99	4,814.01	-559.55	1,233.16	1,138.53	94.63	13.031				
12,700.00	7,705.00	11,497.34	6,480.00	85.21	85.53	-6.99	4,914.00	-558.13	1,233.16	1,136.99	96.16	12.823				
12,800.00	7,705.00	11,597.34	6,480.00	86.80	87.11	-6.99	5,013.99	-556.71	1,233.16	1,135.45	97.70	12.622				

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 Jawbone Fed Com LW 15H
Project:	Eddy County, New Mexico NAD27 NME	TVD Reference:	RKB=3381+26.5 @ 3407.50ft
Reference Site:	Jawbone	MD Reference:	RKB=3381+26.5 @ 3407.50ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Jawbone Fed Com LW 15H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DT_Aug2923v16
Reference Design:	rev1	Offset TVD Reference:	Offset Datum

Offset Design: Jawbone - Jawbone Fed Com LW 16H - Original Hole - rev1												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 (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
12,900.00	7,705.00	11,697.34	6,480.00	88.39	88.70	-6.99	5,113.98	-555.29	1,233.16	1,133.91	99.24	12.426	
13,000.00	7,705.00	11,797.34	6,480.00	89.99	90.29	-6.99	5,213.97	-553.88	1,233.16	1,132.37	100.78	12.236	
13,100.00	7,705.00	11,897.34	6,480.00	91.58	91.89	-6.99	5,313.96	-552.46	1,233.16	1,130.83	102.33	12.051	
13,200.00	7,705.00	11,997.34	6,480.00	93.18	93.48	-6.99	5,413.95	-551.04	1,233.16	1,129.28	103.87	11.872	
13,300.00	7,705.00	12,097.34	6,480.00	94.78	95.08	-6.99	5,513.94	-549.62	1,233.16	1,127.74	105.42	11.697	
13,400.00	7,705.00	12,197.34	6,480.00	96.38	96.68	-6.99	5,613.93	-548.21	1,233.16	1,126.19	106.97	11.528	
13,500.00	7,705.00	12,297.34	6,480.00	97.99	98.28	-6.99	5,713.92	-546.79	1,233.16	1,124.63	108.52	11.363	
13,600.00	7,705.00	12,397.34	6,480.00	99.59	99.88	-6.99	5,813.91	-545.37	1,233.16	1,123.08	110.08	11.203	
13,700.00	7,705.00	12,497.34	6,480.00	101.20	101.49	-6.99	5,913.90	-543.95	1,233.16	1,121.53	111.63	11.047	
13,800.00	7,705.00	12,597.34	6,480.00	102.81	103.09	-6.99	6,013.89	-542.54	1,233.16	1,119.97	113.19	10.895	
13,900.00	7,705.00	12,697.34	6,480.00	104.42	104.70	-6.99	6,113.88	-541.12	1,233.16	1,118.41	114.74	10.747	
14,000.00	7,705.00	12,797.34	6,480.00	106.03	106.31	-6.99	6,213.87	-539.70	1,233.16	1,116.85	116.30	10.603	
14,100.00	7,705.00	12,897.34	6,480.00	107.64	107.92	-6.99	6,313.86	-538.28	1,233.16	1,115.29	117.86	10.463	
14,200.00	7,705.00	12,997.34	6,480.00	109.25	109.53	-6.99	6,413.85	-536.87	1,233.16	1,113.73	119.42	10.326	
14,300.00	7,705.00	13,097.34	6,480.00	110.87	111.14	-6.99	6,513.84	-535.45	1,233.16	1,112.17	120.99	10.193	
14,400.00	7,705.00	13,197.34	6,480.00	112.48	112.75	-6.99	6,613.83	-534.03	1,233.16	1,110.61	122.55	10.062	
14,500.00	7,705.00	13,297.34	6,480.00	114.10	114.37	-6.99	6,713.82	-532.62	1,233.16	1,109.04	124.12	9.936	
14,600.00	7,705.00	13,397.34	6,480.00	115.71	115.98	-6.99	6,813.81	-531.20	1,233.16	1,107.48	125.68	9.812	
14,700.00	7,705.00	13,497.34	6,480.00	117.33	117.60	-6.99	6,913.80	-529.78	1,233.16	1,105.91	127.25	9.691	
14,800.00	7,705.00	13,597.34	6,480.00	118.95	119.21	-6.99	7,013.79	-528.36	1,233.16	1,104.34	128.82	9.573	
14,900.00	7,705.00	13,697.34	6,480.00	120.57	120.83	-6.99	7,113.78	-526.95	1,233.16	1,102.77	130.39	9.458	
15,000.00	7,705.00	13,797.34	6,480.00	122.19	122.45	-6.99	7,213.77	-525.53	1,233.16	1,101.20	131.96	9.345	
15,100.00	7,705.00	13,897.34	6,480.00	123.81	124.07	-6.99	7,313.76	-524.11	1,233.16	1,099.63	133.53	9.235	
15,200.00	7,705.00	13,997.34	6,480.00	125.43	125.69	-6.99	7,413.75	-522.69	1,233.16	1,098.06	135.10	9.128	
15,300.00	7,705.00	14,097.34	6,480.00	127.06	127.31	-6.99	7,513.74	-521.28	1,233.16	1,096.49	136.67	9.023	
15,400.00	7,705.00	14,197.34	6,480.00	128.68	128.93	-6.99	7,613.73	-519.86	1,233.16	1,094.91	138.25	8.920	
15,500.00	7,705.00	14,297.34	6,480.00	130.30	130.56	-6.99	7,713.72	-518.44	1,233.16	1,093.34	139.82	8.820	
15,600.00	7,705.00	14,397.34	6,480.00	131.93	132.18	-6.99	7,813.71	-517.02	1,233.16	1,091.76	141.40	8.721	
15,700.00	7,705.00	14,497.34	6,480.00	133.55	133.80	-6.99	7,913.70	-515.61	1,233.16	1,090.19	142.97	8.625	
15,800.00	7,705.00	14,597.34	6,480.00	135.18	135.43	-6.99	8,013.69	-514.19	1,233.16	1,088.61	144.55	8.531	
15,900.00	7,705.00	14,697.34	6,480.00	136.81	137.05	-6.99	8,113.68	-512.77	1,233.16	1,087.03	146.12	8.439	
16,000.00	7,705.00	14,797.34	6,480.00	138.43	138.68	-6.99	8,213.67	-511.35	1,233.16	1,085.45	147.70	8.349	
16,100.00	7,705.00	14,897.34	6,480.00	140.06	140.30	-6.99	8,313.66	-509.94	1,233.16	1,083.88	149.28	8.261	
16,200.00	7,705.00	14,997.34	6,480.00	141.69	141.93	-6.99	8,413.65	-508.52	1,233.16	1,082.30	150.86	8.174	
16,300.00	7,705.00	15,097.34	6,480.00	143.32	143.56	-6.99	8,513.64	-507.10	1,233.16	1,080.72	152.44	8.089	
16,400.00	7,705.00	15,197.34	6,480.00	144.95	145.18	-6.99	8,613.63	-505.69	1,233.16	1,079.14	154.02	8.006	
16,500.00	7,705.00	15,297.34	6,480.00	146.58	146.81	-6.99	8,713.62	-504.27	1,233.16	1,077.56	155.60	7.925	
16,600.00	7,705.00	15,397.34	6,480.00	148.21	148.44	-6.99	8,813.61	-502.85	1,233.16	1,075.97	157.18	7.845	
16,700.00	7,705.00	15,497.34	6,480.00	149.84	150.07	-6.99	8,913.60	-501.43	1,233.16	1,074.39	158.77	7.767	
16,800.00	7,705.00	15,597.34	6,480.00	151.47	151.70	-6.99	9,013.59	-500.02	1,233.16	1,072.81	160.35	7.690	
16,900.00	7,705.00	15,697.34	6,480.00	153.10	153.33	-6.99	9,113.58	-498.60	1,233.16	1,071.23	161.93	7.615	
17,000.00	7,705.00	15,797.34	6,480.00	154.73	154.96	-6.99	9,213.57	-497.18	1,233.16	1,069.64	163.52	7.542	
17,100.00	7,705.00	15,897.34	6,480.00	156.36	156.59	-6.99	9,313.56	-495.76	1,233.16	1,068.06	165.10	7.469	
17,200.00	7,705.00	15,997.34	6,480.00	158.00	158.22	-6.99	9,413.55	-494.35	1,233.16	1,066.47	166.68	7.398	
17,300.00	7,705.00	16,097.34	6,480.00	159.63	159.85	-6.99	9,513.54	-492.93	1,233.16	1,064.89	168.27	7.328	
17,400.00	7,705.00	16,197.34	6,480.00	161.26	161.49	-6.99	9,613.53	-491.51	1,233.16	1,063.30	169.85	7.260	
17,500.00	7,705.00	16,297.34	6,480.00	162.89	163.12	-6.99	9,713.52	-490.09	1,233.16	1,061.72	171.44	7.193	
17,600.00	7,705.00	16,397.34	6,480.00	164.53	164.75	-6.99	9,813.51	-488.68	1,233.16	1,060.13	173.03	7.127	
17,700.00	7,705.00	16,497.34	6,480.00	166.16	166.38	-6.99	9,913.50	-487.26	1,233.16	1,058.54	174.61	7.062	
17,800.00	7,705.00	16,597.34	6,480.00	167.80	168.02	-6.99	10,013.49	-485.84	1,233.16	1,056.96	176.20	6.999	
17,900.00	7,705.00	16,697.34	6,480.00	169.43	169.65	-6.99	10,113.48	-484.43	1,233.16	1,055.37	177.79	6.936	
18,000.00	7,705.00	16,797.34	6,480.00	171.07	171.28	-6.99	10,213.47	-483.01	1,233.16	1,053.78	179.38	6.875	

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 Jawbone Fed Com LW 15H
Project:	Eddy County, New Mexico NAD27 NME	TVD Reference:	RKB=3381+26.5 @ 3407.50ft
Reference Site:	Jawbone	MD Reference:	RKB=3381+26.5 @ 3407.50ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Jawbone Fed Com LW 15H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DT_Aug2923v16
Reference Design:	rev1	Offset TVD Reference:	Offset Datum

Offset Design: Jawbone - Jawbone Fed Com LW 16H - Original Hole - rev1													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		
18,008.54	7,705.00	16,805.88	6,480.00	171.21	171.42	-6.99	10,222.01	-482.89	1,233.16	1,053.65	179.51	6.870		
18,078.19	7,705.00	16,875.40	6,480.00	172.34	172.56	-6.99	10,291.52	-481.90	1,233.16	1,052.54	180.62	6.828		

FLAT CREEK
RESOURCES

Anticollision Report

Company:	Flat Creek Resources, LLC	Local Co-ordinate Reference:	Well Jawbone Fed Com LW 15H
Project:	Eddy County, New Mexico NAD27 NME	TVD Reference:	RKB=3381+26.5 @ 3407.50ft
Reference Site:	Jawbone	MD Reference:	RKB=3381+26.5 @ 3407.50ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Jawbone Fed Com LW 15H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DT_Aug2923v16
Reference Design:	rev1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to RKB=3381+26.5 @ 3407.50ft

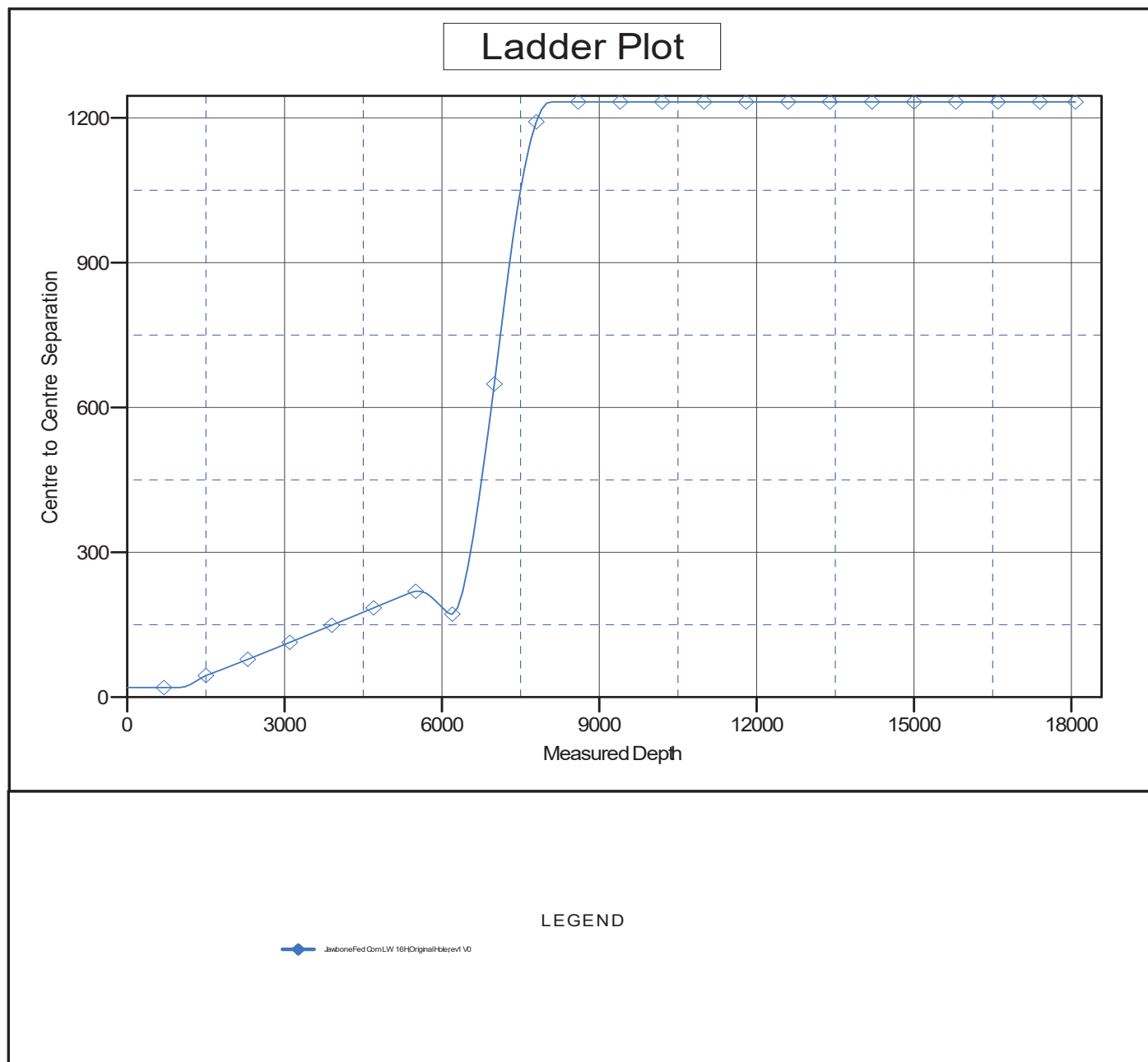
Offset Depths are relative to Offset Datum

Central Meridian is -104.333333333

Coordinates are relative to: Jawbone Fed Com LW 15H

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

Grid Convergence at Surface is: 0.03°



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 Jawbone Fed Com LW 15H
Project:	Eddy County, New Mexico NAD27 NME	TVD Reference:	RKB=3381+26.5 @ 3407.50ft
Reference Site:	Jawbone	MD Reference:	RKB=3381+26.5 @ 3407.50ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Jawbone Fed Com LW 15H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DT_Aug2923v16
Reference Design:	rev1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to RKB=3381+26.5 @ 3407.50ft

Offset Depths are relative to Offset Datum

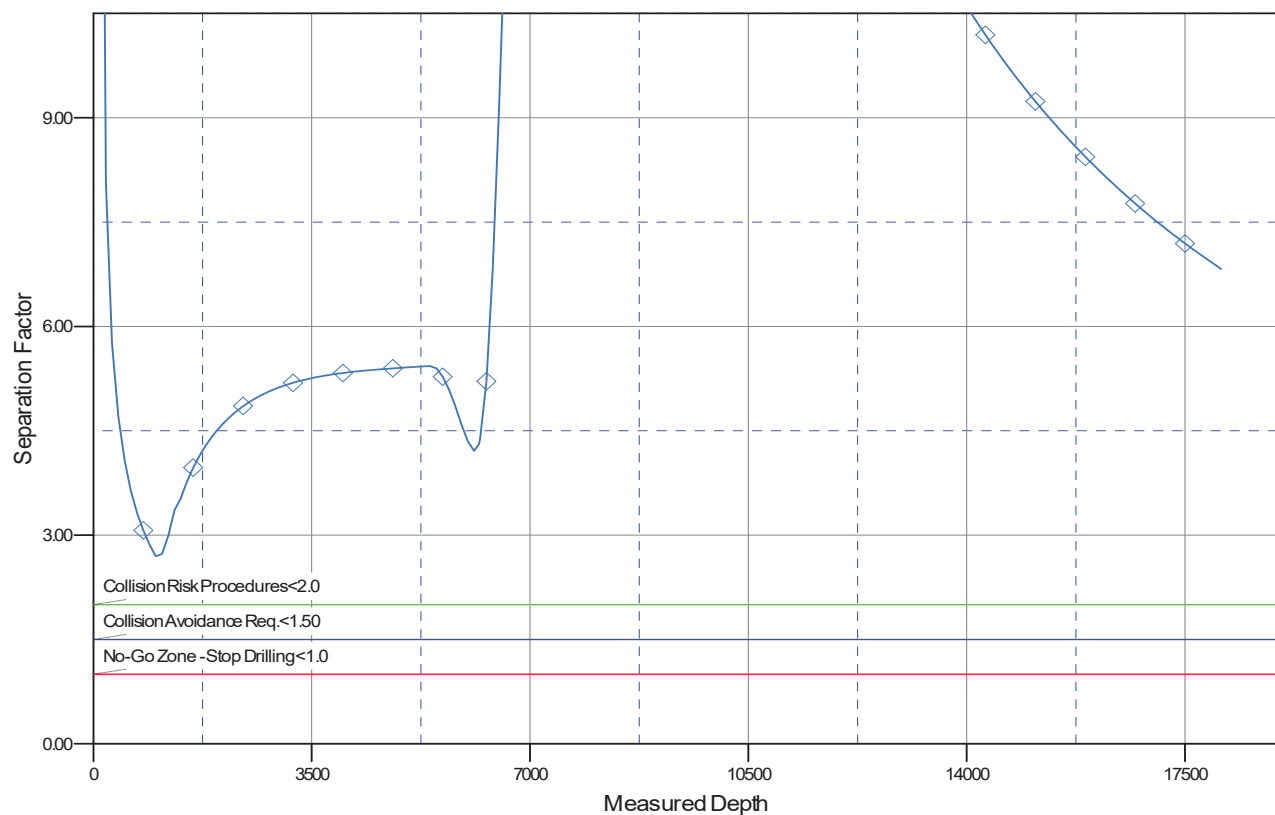
Central Meridian is -104.33333333

Coordinates are relative to: Jawbone Fed Com LW 15H

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

Grid Convergence at Surface is: 0.03°

Separation Factor Plot



LEGEND

JawboneFed Com LW 15H Original Hole rev1 V0

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

Casing Design Worksheet: Jawbone Fed Com LW 15H							
Casing	10-3/4" 45.5#, J-55,STC	7-5/8" 29.7#, HCL-80, Butt	5-1/2" 20#, HC-P110, TCBC-HT	5-1/2" 20#, HC-P110, TCBC-HT			
Collapse, psi	2090	7150	11500	11500			
Internal Yield Pressure, psi	3580	6890	12000	12000			
Body Yield, lbs.	715000	683000	600000	600000			
Joint Strength, lbs.	796000	785000	600000	600000			
<u>Collapse Load</u>	<u>Surface</u>	<u>Intermediate</u>	<u>Production Top</u>	<u>Production Bottom</u>			
Depth, feet	300	1900	7132	7705			
Mud Weight, ppg	9	10	9.2	9.2			
Pressure, psi	140.4	988	3411.9	3686.1			
Design Safety Factor	14.9	7.2	3.4	3.1			
<u>Burst Load</u>							
Depth, feet	300	1900	7132	7691			
Mud Weight, ppg	9	10	9.2	9.2			
Pressure, psi	140.4	988	3411.9	3679.4			
Design Safety Factor	25.5	7.0	3.5	3.3			
<u>Body Tensile</u>							
Depth, feet	300	1900	7132	Horizontal			
Pipe Weight, ppf	40.5	29.7	20				
String Weight, lbs.	12150	56430	142640				
Design Safety Factor	58.8	12.1	4.2				
<u>Joint Tensile</u>							
Depth, feet	300	1900	7132	Horizontal			
Pipe Weight, ppf	40.5	29.7	20				
String Weight, lbs.	12150	56430	142640				
Design Safety Factor	65.5	13.9	4.2				



Size	5.5
Grade	HC-P110
Weight	20

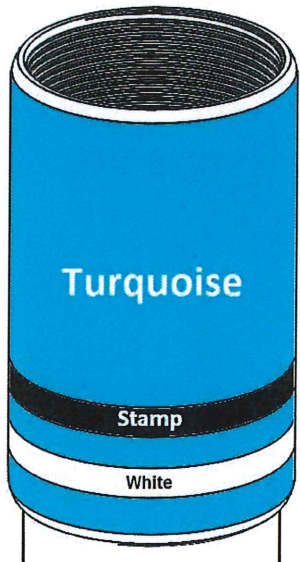
TCBC-HT

Coupling and Pipe Dimensions (in)						
	Outer Diameter	Inner Diameter	Coupling Length	Make-up Loss	Wall Thickness	Drift Diameter
Coupling	5.900	5.383	8.250	4.125	0.361	4.653
Pipe		4.778				
Pin		4.778				

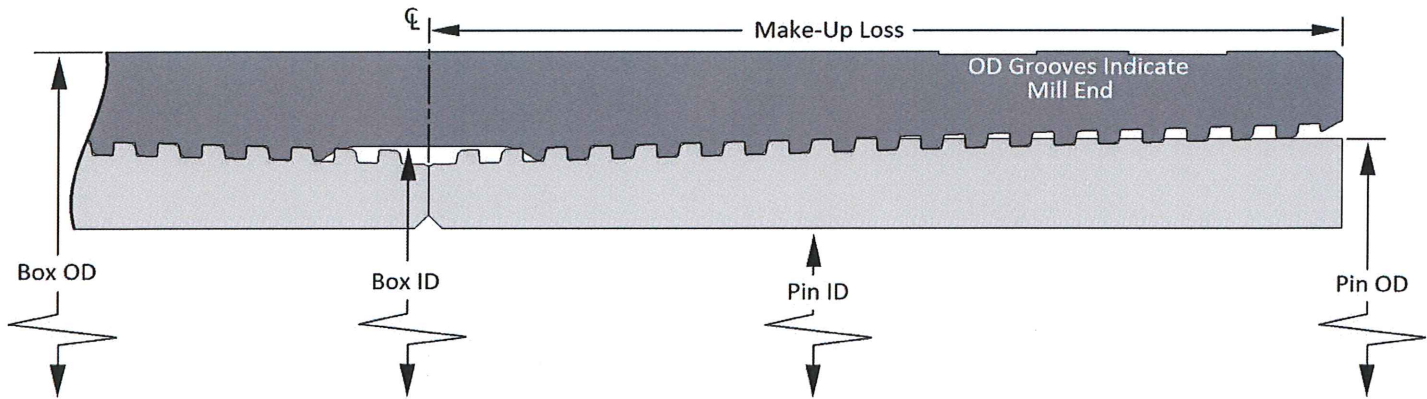
Torque Values (ft-lbs)				
Field End Make-Up			Max. Working Torque ¹	Yield Torque
Minimum	Optimum ²	Maximum		
10,000	13,500	18,500	20,250	24,000

Yield Stress (x1000 lbs.)	
Tensile	Compressive
600	600

Maximum Pressure (psi)	
Internal	External
12,000	11,500



- ¹. Max. Working Torque value is not to be exceeded during operation.
². If Optimum Torque does not meet the Base of Triangle Stamp, M/U to the Base of Triangle.



*Data are for information purposes only. Though HIS has made efforts to ensure accuracy, HIS makes no warranty for loss or damage due to its use.

Rev 0

19996 Hickory Twig Way Spring, TX 77388
 Phone: (281) 602-7550
 Fax: (281) 602-7557

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 298502

CONDITIONS

Operator: Flat Creek Resources, LLC 777 Main St. Fort Worth, TX 76102	OGRID: 374034
	Action Number: 298502
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
ward.rikala	All original COA's still apply.	1/29/2024