

BONANZA CREEK ENERGY OPERATING

Well Name: **Wetco Farms F-J-4HC**

Surface Location: Wetco Farms F-J-4HC Pad Sec.4-T4N-R63W
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone
Ground Elevation: 4569.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1371340.56	3292187.95	40.347990	-104.451670	

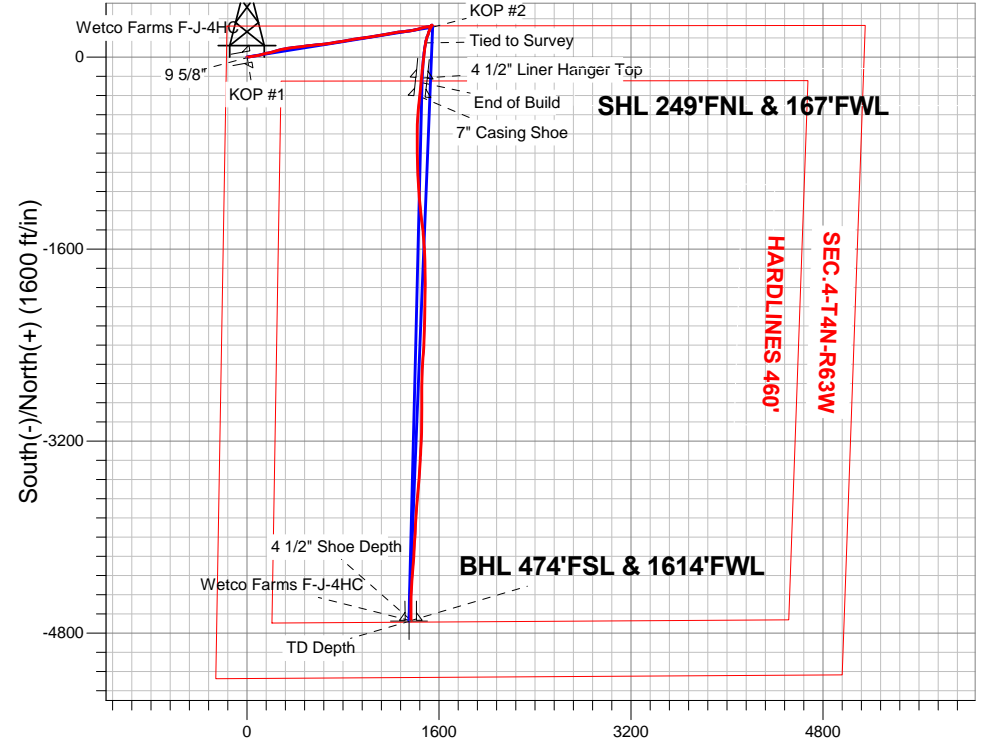
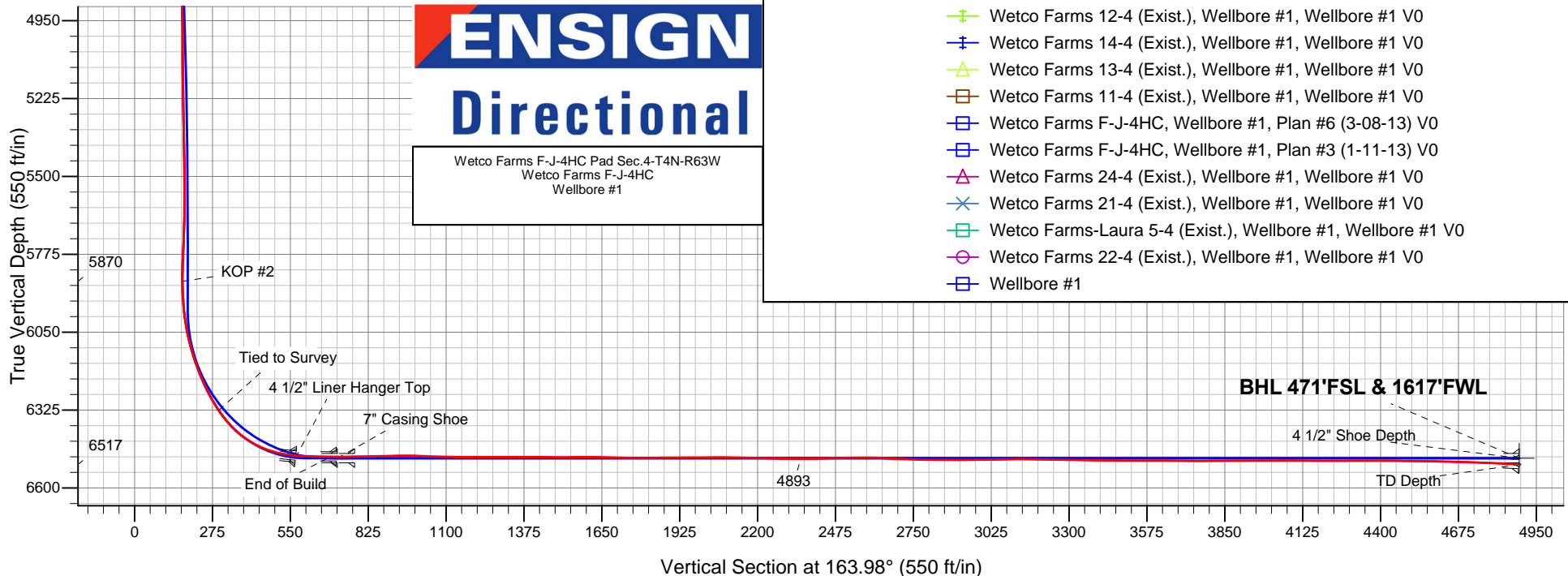
Ensign 136 - RKB 12' WELL @ 4581.0ft (Ensign 136 - RKB 12')

FINAL SURVEY

Projected Bottom Hole Location
11484' MD 6517' TVD 4699' S & 1366' E
of SHL
87.6 degree Incl @ 179.7 degree AZM

ANNOTATIONS

TVD	MD	Annotation
284.0	284.0	KOP #1
5869.9	6113.0	KOP #2
6516.6	11484.0	TD Depth



OFFSET WELLS

- Wetco Farms 12-4 (Exist.), Wellbore #1, Wellbore #1 V0
- Wetco Farms 14-4 (Exist.), Wellbore #1, Wellbore #1 V0
- Wetco Farms 13-4 (Exist.), Wellbore #1, Wellbore #1 V0
- Wetco Farms 11-4 (Exist.), Wellbore #1, Wellbore #1 V0
- Wetco Farms F-J-4HC, Wellbore #1, Plan #6 (3-08-13) V0
- Wetco Farms F-J-4HC, Wellbore #1, Plan #3 (1-11-13) V0
- Wetco Farms 24-4 (Exist.), Wellbore #1, Wellbore #1 V0
- Wetco Farms 21-4 (Exist.), Wellbore #1, Wellbore #1 V0
- Wetco Farms-Laura 5-4 (Exist.), Wellbore #1, Wellbore #1 V0
- Wetco Farms 22-4 (Exist.), Wellbore #1, Wellbore #1 V0
- Wellbore #1



Directional

BONANZA CREEK ENERGY OPERATING

SEC.4-T4N-R63W

Wetco Farms F-J-4HC Pad Sec.4-T4N-R63W

Wetco Farms F-J-4HC

Wellbore #1

Survey: Survey #1

Standard Survey Report

19 March, 2013

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well Wetco Farms F-J-4HC
Project:	SEC.4-T4N-R63W	TVD Reference:	WELL @ 4581.0ft (Ensign 136 - RKB 12')
Site:	Wetco Farms F-J-4HC Pad Sec.4-T4N-R63W	MD Reference:	WELL @ 4581.0ft (Ensign 136 - RKB 12')
Well:	Wetco Farms F-J-4HC	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Project	SEC.4-T4N-R63W, Weld County, Colorado		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		Using Well Reference Point
Map Zone:	Colorado Northern Zone		Using geodetic scale factor

Site	Wetco Farms F-J-4HC Pad Sec.4-T4N-R63W				
Site Position:		Northing:	1,371,340.59ft	Latitude:	40.347990
From:	Lat/Long	Easting:	3,292,187.95ft	Longitude:	-104.451670
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.68 °

Well	Wetco Farms F-J-4HC					
Well Position	+N/-S	0.0 ft	Northing:	1,371,340.56 ft	Latitude:	40.347990
	+E/-W	0.0 ft	Easting:	3,292,187.95 ft	Longitude:	-104.451670
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,569.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	3/2/2013	8.46	67.00	52,959

Design	Wellbore #1				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.0	0.0	0.0	163.98	

Survey Program	Date	3/19/2013			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
105.0	11,484.0	Survey #1 (Wellbore #1)	MWD	MWD - Standard	

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)	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
105.0	0.30	239.80	105.0	-0.1	-0.2	0.1	0.29	0.29	0.00	
193.0	0.30	158.60	193.0	-0.5	-0.4	0.4	0.44	0.00	-92.27	
284.0	1.30	85.50	284.0	-0.6	0.8	0.8	1.37	1.10	-80.33	
KOP #1										
368.0	2.50	82.00	367.9	-0.3	3.5	1.2	1.43	1.43	-4.17	
453.0	3.30	80.00	452.8	0.4	7.8	1.8	0.95	0.94	-2.35	
538.0	4.40	84.40	537.6	1.1	13.4	2.6	1.34	1.29	5.18	
622.0	6.80	81.60	621.2	2.2	21.6	3.8	2.87	2.86	-3.33	
670.0	7.90	81.10	668.8	3.1	27.6	4.6	2.30	2.29	-1.04	
711.0	8.73	79.69	709.4	4.1	33.5	5.3	2.09	2.04	-3.43	
9 5/8"										
724.0	9.00	79.30	722.3	4.5	35.4	5.5	2.09	2.04	-3.02	

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well Wetco Farms F-J-4HC
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Site:	Wetco Farms F-J-4HC Pad Sec.4-T4N-R63W	MD Reference:	WELL @ 4581.0ft (Ensign 136 - RKB 12')
Well:	Wetco Farms F-J-4HC	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

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)
818.0	10.50	84.20	814.9	6.7	51.2	7.7	1.82	1.60	5.21
911.0	13.60	80.90	905.8	9.3	70.4	10.5	3.41	3.33	-3.55
1,028.0	15.60	76.50	1,019.1	15.1	99.3	12.9	1.95	1.71	-3.76
1,155.0	17.30	74.60	1,140.9	24.1	134.1	13.8	1.40	1.34	-1.50
1,282.0	20.20	79.10	1,261.1	33.3	173.9	16.0	2.55	2.28	3.54
1,409.0	19.40	75.80	1,380.6	42.6	215.8	18.6	1.08	-0.63	-2.60
1,537.0	18.80	70.90	1,501.6	54.6	255.9	18.2	1.34	-0.47	-3.83
1,664.0	19.90	80.70	1,621.4	64.8	296.6	19.6	2.70	0.87	7.72
1,791.0	20.20	79.10	1,740.7	72.4	339.5	24.1	0.49	0.24	-1.26
1,918.0	20.00	84.80	1,860.0	78.5	382.7	30.1	1.55	-0.16	4.49
2,045.0	19.40	84.60	1,979.6	82.5	425.3	38.1	0.48	-0.47	-0.16
2,172.0	20.00	79.00	2,099.1	88.6	467.6	43.9	1.56	0.47	-4.41
2,275.0	18.30	84.10	2,196.4	93.6	501.0	48.3	2.31	-1.65	4.95
2,396.0	18.20	84.40	2,311.4	97.4	538.7	55.0	0.11	-0.08	0.25
2,518.0	18.10	84.20	2,427.3	101.2	576.5	61.8	0.10	-0.08	-0.16
2,647.0	19.40	84.40	2,549.4	105.3	617.8	69.2	1.01	1.01	0.16
2,775.0	19.20	82.50	2,670.2	110.1	659.8	76.2	0.51	-0.16	-1.48
2,903.0	18.60	80.40	2,791.3	116.3	700.8	81.6	0.71	-0.47	-1.64
3,032.0	18.30	79.10	2,913.7	123.6	741.0	85.7	0.39	-0.23	-1.01
3,160.0	17.30	84.20	3,035.6	129.3	779.6	90.9	1.45	-0.78	3.98
3,288.0	18.40	80.90	3,157.4	134.4	818.5	96.7	1.17	0.86	-2.58
3,417.0	18.90	79.70	3,279.7	141.4	859.2	101.2	0.49	0.39	-0.93
3,545.0	18.50	78.30	3,400.9	149.2	899.4	104.8	0.47	-0.31	-1.09
3,673.0	18.40	83.00	3,522.3	155.8	939.4	109.5	1.16	-0.08	3.67
3,802.0	18.90	83.40	3,644.6	160.6	980.3	116.1	0.40	0.39	0.31
3,930.0	18.40	80.90	3,765.8	166.2	1,020.9	122.0	0.74	-0.39	-1.95
4,058.0	19.00	80.20	3,887.1	173.0	1,061.4	126.7	0.50	0.47	-0.55
4,186.0	18.20	79.70	4,008.4	180.1	1,101.6	130.9	0.64	-0.63	-0.39
4,315.0	19.10	81.30	4,130.6	186.9	1,142.3	135.6	0.80	0.70	1.24
4,443.0	18.50	79.00	4,251.8	193.9	1,182.9	140.1	0.74	-0.47	-1.80
4,571.0	19.00	79.30	4,373.0	201.7	1,223.3	143.8	0.40	0.39	0.23
4,700.0	18.80	82.80	4,495.0	208.2	1,264.6	148.9	0.89	-0.16	2.71
4,830.0	19.30	85.10	4,617.9	212.6	1,306.7	156.3	0.69	0.38	1.77
4,958.0	18.10	82.10	4,739.2	217.2	1,347.5	163.1	1.20	-0.94	-2.34
5,087.0	19.30	78.60	4,861.4	224.1	1,388.3	167.7	1.27	0.93	-2.71
5,215.0	16.10	74.90	4,983.3	232.9	1,426.2	169.7	2.65	-2.50	-2.89
5,343.0	13.70	74.00	5,107.0	241.8	1,457.9	170.0	1.88	-1.88	-0.70
5,472.0	10.70	80.20	5,233.1	248.0	1,484.4	171.3	2.53	-2.33	4.81
5,600.0	9.30	82.00	5,359.1	251.5	1,506.3	174.0	1.12	-1.09	1.41
5,728.0	7.30	77.70	5,485.8	254.6	1,524.5	176.0	1.63	-1.56	-3.36
5,857.0	3.30	63.70	5,614.2	258.0	1,535.8	175.8	3.24	-3.10	-10.85
5,985.0	3.40	27.50	5,742.0	263.0	1,540.9	172.4	1.63	0.08	-28.28
6,028.0	2.70	9.40	5,784.9	265.2	1,541.6	170.6	2.75	-1.63	-42.09
6,071.0	1.60	346.20	5,827.9	266.7	1,541.7	169.1	3.21	-2.56	-53.95
6,113.0	1.60	215.70	5,869.9	266.8	1,541.2	168.9	6.92	0.00	-310.71
KOP #2									
6,156.0	3.70	217.80	5,912.8	265.3	1,540.0	170.0	4.89	4.88	4.88
6,199.0	7.00	209.90	5,955.6	261.9	1,537.8	172.7	7.85	7.67	-18.37
6,242.0	10.50	206.40	5,998.1	256.1	1,534.8	177.4	8.23	8.14	-8.14
6,285.0	13.60	206.20	6,040.2	248.1	1,530.8	184.0	7.21	7.21	-0.47
6,327.0	17.70	204.30	6,080.6	237.8	1,526.0	192.6	9.84	9.76	-4.52
6,370.0	20.60	201.00	6,121.2	224.8	1,520.6	203.6	7.20	6.74	-7.67
6,413.0	23.00	198.50	6,161.2	209.7	1,515.2	216.6	5.98	5.58	-5.81
6,456.0	26.90	198.70	6,200.1	192.6	1,509.4	231.5	9.07	9.07	0.47

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Well:	Wetco Farms F-J-4HC	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

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)
6,498.0	29.40	198.90	6,237.2	173.8	1,503.0	247.7	5.96	5.95	0.48
6,541.0	32.10	196.90	6,274.1	152.9	1,496.3	266.0	6.71	6.28	-4.65
6,584.0	35.90	193.60	6,309.8	129.7	1,490.0	286.6	9.82	8.84	-7.67
6,604.0	37.50	190.60	6,325.8	118.0	1,487.5	297.1	12.01	8.00	-15.00
6,627.0	39.60	188.10	6,343.8	103.9	1,485.2	310.0	11.37	9.13	-10.87
6,648.0	41.50	186.90	6,359.7	90.3	1,483.4	322.6	9.78	9.05	-5.71
6,670.0	44.40	186.50	6,375.8	75.4	1,481.7	336.4	13.24	13.18	-1.82
6,691.0	47.80	186.40	6,390.4	60.4	1,480.0	350.4	16.19	16.19	-0.48
6,712.0	51.10	186.70	6,404.1	44.6	1,478.1	365.1	15.75	15.71	1.43
6,733.0	54.60	186.40	6,416.7	27.9	1,476.2	380.6	16.71	16.67	-1.43
6,755.0	58.10	186.50	6,428.9	9.7	1,474.2	397.5	15.91	15.91	0.45
6,776.0	61.60	186.90	6,439.5	-8.3	1,472.1	414.2	16.75	16.67	1.90
6,798.0	65.20	187.10	6,449.3	-27.8	1,469.7	432.3	16.38	16.36	0.91
6,819.0	68.70	187.80	6,457.5	-47.0	1,467.2	450.0	16.95	16.67	3.33
6,841.0	72.20	186.50	6,464.9	-67.5	1,464.6	469.1	16.86	15.91	-5.91
6,862.0	75.40	184.80	6,470.8	-87.6	1,462.6	487.8	17.11	15.24	-8.10
6,883.0	78.00	185.70	6,475.6	-108.0	1,460.7	506.9	13.06	12.38	4.29
6,904.0	79.80	185.30	6,479.6	-128.5	1,458.8	526.1	8.77	8.57	-1.90
6,926.0	82.00	184.80	6,483.1	-150.1	1,456.8	546.3	10.25	10.00	-2.27
6,947.0	84.50	185.30	6,485.6	-170.9	1,455.0	565.8	12.14	11.90	2.38
6,950.6	84.96	185.45	6,485.9	-174.5	1,454.7	569.2	13.37	12.73	4.10
4 1/2" Liner Hanger Top									
6,969.0	87.30	186.20	6,487.2	-192.7	1,452.8	586.2	13.37	12.73	4.09
6,990.0	89.00	185.80	6,487.8	-213.6	1,450.6	605.6	8.32	8.10	-1.90
7,012.0	89.20	186.40	6,488.2	-235.5	1,448.3	626.0	2.87	0.91	2.73
7,033.0	89.30	186.20	6,488.5	-256.3	1,446.0	645.4	1.06	0.48	-0.95
7,055.0	89.30	186.00	6,488.7	-278.2	1,443.6	665.8	0.91	0.00	-0.91
7,105.0	89.51	186.14	6,489.2	-327.9	1,438.3	712.1	0.51	0.42	0.28
7" Casing Shoe									
7,126.0	89.60	186.20	6,489.4	-348.8	1,436.1	731.6	0.51	0.42	0.28
7,128.3	89.62	186.22	6,489.4	-351.1	1,435.8	733.7	0.94	0.67	0.67
T1 620'FNL & 1700'FWL									
7,156.0	89.80	186.40	6,489.6	-378.6	1,432.8	759.3	0.94	0.67	0.67
7,187.0	90.40	185.00	6,489.5	-409.5	1,429.7	788.1	4.91	1.94	-4.52
7,217.0	91.30	185.10	6,489.1	-439.3	1,427.1	816.1	3.02	3.00	0.33
7,247.0	91.90	185.00	6,488.2	-469.2	1,424.4	844.1	2.03	2.00	-0.33
7,277.0	92.10	183.70	6,487.2	-499.1	1,422.2	872.2	4.38	0.67	-4.33
7,308.0	91.60	182.50	6,486.2	-530.0	1,420.5	901.5	4.19	-1.61	-3.87
7,338.0	90.00	181.80	6,485.8	-560.0	1,419.4	930.0	5.82	-5.33	-2.33
7,368.0	89.80	180.60	6,485.8	-590.0	1,418.7	958.6	4.06	-0.67	-4.00
7,399.0	88.90	180.60	6,486.2	-621.0	1,418.4	988.3	2.90	-2.90	0.00
7,442.0	88.00	180.00	6,487.3	-664.0	1,418.2	1,029.6	2.52	-2.09	-1.40
7,484.0	88.10	179.30	6,488.8	-706.0	1,418.4	1,070.0	1.68	0.24	-1.67
7,527.0	88.60	179.30	6,490.0	-748.9	1,419.0	1,111.5	1.16	1.16	0.00
7,570.0	89.00	179.70	6,490.9	-791.9	1,419.3	1,152.9	1.32	0.93	0.93
7,613.0	90.00	178.80	6,491.3	-834.9	1,419.9	1,194.4	3.13	2.33	-2.09
7,655.0	90.10	178.80	6,491.2	-876.9	1,420.8	1,235.0	0.24	0.24	0.00
7,698.0	90.20	178.50	6,491.1	-919.9	1,421.8	1,276.6	0.74	0.23	-0.70
7,741.0	90.50	177.90	6,490.9	-962.9	1,423.1	1,318.2	1.56	0.70	-1.40
7,784.0	90.30	178.10	6,490.6	-1,005.9	1,424.6	1,360.0	0.66	-0.47	0.47
7,827.0	89.70	176.90	6,490.6	-1,048.8	1,426.5	1,401.8	3.12	-1.40	-2.79
7,869.0	89.40	176.20	6,490.9	-1,090.7	1,429.0	1,442.8	1.81	-0.71	-1.67
7,912.0	89.70	175.80	6,491.2	-1,133.6	1,432.0	1,484.8	1.16	0.70	-0.93
7,955.0	90.00	174.10	6,491.3	-1,176.5	1,435.8	1,527.0	4.01	0.70	-3.95

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Project:	SEC.4-T4N-R63W	TVD Reference:	WELL @ 4581.0ft (Ensign 136 - RKB 12')
Site:	Wetco Farms F-J-4HC Pad Sec.4-T4N-R63W	MD Reference:	WELL @ 4581.0ft (Ensign 136 - RKB 12')
Well:	Wetco Farms F-J-4HC	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

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)
7,998.0	90.90	174.90	6,491.0	-1,219.3	1,440.0	1,569.3	2.80	2.09	1.86
8,040.0	89.80	173.40	6,490.7	-1,261.0	1,444.2	1,610.6	4.43	-2.62	-3.57
8,083.0	88.60	173.00	6,491.3	-1,303.7	1,449.3	1,653.1	2.94	-2.79	-0.93
8,126.0	88.60	173.40	6,492.4	-1,346.4	1,454.4	1,695.5	0.93	0.00	0.93
8,169.0	88.80	172.80	6,493.4	-1,389.1	1,459.6	1,738.0	1.47	0.47	-1.40
8,212.0	89.30	173.70	6,494.1	-1,431.8	1,464.6	1,780.4	2.39	1.16	2.09
8,254.0	91.00	175.30	6,494.0	-1,473.6	1,468.7	1,821.7	5.56	4.05	3.81
8,297.0	90.80	175.50	6,493.3	-1,516.5	1,472.1	1,863.8	0.66	-0.47	0.47
8,340.0	90.30	177.10	6,492.9	-1,559.4	1,474.9	1,905.8	3.90	-1.16	3.72
8,383.0	90.00	176.50	6,492.8	-1,602.3	1,477.3	1,947.8	1.56	-0.70	-1.40
8,426.0	90.70	177.60	6,492.5	-1,645.2	1,479.5	1,989.6	3.03	1.63	2.56
8,468.0	90.50	177.60	6,492.1	-1,687.2	1,481.3	2,030.5	0.48	-0.48	0.00
8,511.0	90.00	177.90	6,491.9	-1,730.2	1,482.9	2,072.2	1.36	-1.16	0.70
8,554.0	89.40	179.00	6,492.1	-1,773.1	1,484.1	2,113.9	2.91	-1.40	2.56
8,597.0	88.60	179.30	6,492.9	-1,816.1	1,484.7	2,155.3	1.99	-1.86	0.70
8,640.0	88.10	180.00	6,494.1	-1,859.1	1,485.0	2,196.7	2.00	-1.16	1.63
8,682.0	89.10	179.90	6,495.1	-1,901.1	1,485.0	2,237.1	2.39	2.38	-0.24
8,725.0	89.30	180.90	6,495.7	-1,944.1	1,484.7	2,278.3	2.37	0.47	2.33
8,768.0	88.80	182.00	6,496.4	-1,987.1	1,483.7	2,319.4	2.81	-1.16	2.56
8,811.0	90.20	181.60	6,496.8	-2,030.0	1,482.3	2,360.3	3.39	3.26	-0.93
8,853.0	91.10	181.30	6,496.3	-2,072.0	1,481.2	2,400.3	2.26	2.14	-0.71
8,896.0	91.70	180.40	6,495.3	-2,115.0	1,480.6	2,441.5	2.51	1.40	-2.09
8,939.0	91.00	180.20	6,494.3	-2,158.0	1,480.4	2,482.7	1.69	-1.63	-0.47
8,982.0	90.80	181.10	6,493.6	-2,201.0	1,479.9	2,523.9	2.14	-0.47	2.09
9,025.0	90.60	181.40	6,493.1	-2,244.0	1,479.0	2,565.0	0.84	-0.47	0.70
9,067.0	88.90	181.60	6,493.3	-2,286.0	1,477.9	2,605.0	4.08	-4.05	0.48
9,110.0	87.50	182.50	6,494.6	-2,328.9	1,476.3	2,645.9	3.87	-3.26	2.09
9,153.0	87.20	182.70	6,496.6	-2,371.8	1,474.4	2,686.6	0.84	-0.70	0.47
9,196.0	87.80	182.90	6,498.5	-2,414.7	1,472.3	2,727.3	1.47	1.40	0.47
9,239.0	88.70	183.90	6,499.8	-2,457.6	1,469.7	2,767.8	3.13	2.09	2.33
9,281.0	89.30	183.60	6,500.5	-2,499.5	1,467.0	2,807.3	1.60	1.43	-0.71
9,324.0	90.10	183.60	6,500.7	-2,542.4	1,464.3	2,847.8	1.86	1.86	0.00
9,367.0	90.10	183.00	6,500.7	-2,585.4	1,461.8	2,888.4	1.40	0.00	-1.40
9,410.0	90.20	182.30	6,500.6	-2,628.3	1,459.8	2,929.1	1.64	0.23	-1.63
9,452.0	90.70	182.20	6,500.2	-2,670.3	1,458.2	2,969.0	1.21	1.19	-0.24
9,495.0	90.90	182.00	6,499.6	-2,713.3	1,456.6	3,009.9	0.66	0.47	-0.47
9,538.0	90.70	181.30	6,499.0	-2,756.2	1,455.3	3,050.8	1.69	-0.47	-1.63
9,581.0	90.90	179.50	6,498.4	-2,799.2	1,455.0	3,092.1	4.21	0.47	-4.19
9,624.0	89.50	179.50	6,498.3	-2,842.2	1,455.4	3,133.5	3.26	-3.26	0.00
9,666.0	89.70	180.00	6,498.6	-2,884.2	1,455.6	3,173.9	1.28	0.48	1.19
9,709.0	89.20	180.60	6,499.0	-2,927.2	1,455.4	3,215.2	1.82	-1.16	1.40
9,752.0	88.90	179.90	6,499.7	-2,970.2	1,455.2	3,256.5	1.77	-0.70	-1.63
9,795.0	88.90	179.70	6,500.5	-3,013.2	1,455.3	3,297.8	0.47	0.00	-0.47
9,837.0	89.30	180.20	6,501.2	-3,055.2	1,455.4	3,338.2	1.52	0.95	1.19
9,880.0	89.00	180.20	6,501.8	-3,098.2	1,455.2	3,379.5	0.70	-0.70	0.00
9,923.0	89.20	181.60	6,502.5	-3,141.2	1,454.6	3,420.6	3.29	0.47	3.26
9,965.0	89.40	182.90	6,503.0	-3,183.2	1,452.9	3,460.5	3.13	0.48	3.10
10,008.0	89.80	183.60	6,503.3	-3,226.1	1,450.5	3,501.1	1.87	0.93	1.63
10,051.0	90.40	183.20	6,503.2	-3,269.0	1,447.9	3,541.6	1.68	1.40	-0.93
10,094.0	90.20	182.90	6,503.0	-3,311.9	1,445.6	3,582.3	0.84	-0.47	-0.70
10,137.0	89.70	181.60	6,503.0	-3,354.9	1,443.9	3,623.1	3.24	-1.16	-3.02
10,179.0	89.30	182.30	6,503.4	-3,396.9	1,442.5	3,663.1	1.92	-0.95	1.67
10,222.0	89.10	183.90	6,504.0	-3,439.8	1,440.2	3,703.7	3.75	-0.47	3.72
10,265.0	89.30	185.30	6,504.6	-3,482.7	1,436.7	3,743.9	3.29	0.47	3.26

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well Wetco Farms F-J-4HC
Project:	SEC.4-T4N-R63W	TVD Reference:	WELL @ 4581.0ft (Ensign 136 - RKB 12')
Site:	Wetco Farms F-J-4HC Pad Sec.4-T4N-R63W	MD Reference:	WELL @ 4581.0ft (Ensign 136 - RKB 12')
Well:	Wetco Farms F-J-4HC	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

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)
10,308.0	90.30	186.40	6,504.8	-3,525.4	1,432.4	3,783.8	3.46	2.33	2.56
10,350.0	90.70	185.80	6,504.4	-3,567.2	1,427.9	3,822.7	1.72	0.95	-1.43
10,393.0	90.80	184.60	6,503.8	-3,610.0	1,424.0	3,862.8	2.80	0.23	-2.79
10,436.0	90.50	184.30	6,503.3	-3,652.9	1,420.7	3,903.1	0.99	-0.70	-0.70
10,479.0	90.00	184.30	6,503.2	-3,695.8	1,417.4	3,943.4	1.16	-1.16	0.00
10,522.0	90.80	184.30	6,502.9	-3,738.7	1,414.2	3,983.7	1.86	1.86	0.00
10,564.0	89.90	183.20	6,502.6	-3,780.6	1,411.5	4,023.3	3.38	-2.14	-2.62
10,607.0	89.40	183.70	6,502.9	-3,823.5	1,408.9	4,063.8	1.64	-1.16	1.16
10,650.0	88.80	182.50	6,503.5	-3,866.4	1,406.6	4,104.4	3.12	-1.40	-2.79
10,693.0	89.60	182.90	6,504.1	-3,909.4	1,404.5	4,145.2	2.08	1.86	0.93
10,736.0	90.70	183.40	6,504.0	-3,952.3	1,402.2	4,185.8	2.81	2.56	1.16
10,778.0	89.90	184.40	6,503.8	-3,994.2	1,399.3	4,225.3	3.05	-1.90	2.38
10,821.0	89.60	183.70	6,504.0	-4,037.1	1,396.3	4,265.6	1.77	-0.70	-1.63
10,864.0	90.40	184.80	6,504.0	-4,080.0	1,393.1	4,306.0	3.16	1.86	2.56
10,907.0	90.60	182.50	6,503.6	-4,122.9	1,390.3	4,346.5	5.37	0.47	-5.35
10,950.0	90.00	182.50	6,503.4	-4,165.8	1,388.5	4,387.2	1.40	-1.40	0.00
10,992.0	89.00	182.70	6,503.8	-4,207.8	1,386.6	4,427.0	2.43	-2.38	0.48
11,035.0	89.70	185.80	6,504.2	-4,250.7	1,383.4	4,467.4	7.39	1.63	7.21
11,078.0	89.20	184.80	6,504.7	-4,293.5	1,379.4	4,507.4	2.60	-1.16	-2.33
11,123.0	89.40	185.00	6,505.2	-4,338.3	1,375.6	4,549.4	0.63	0.44	0.44
11,168.0	88.80	183.70	6,505.9	-4,383.2	1,372.2	4,591.6	3.18	-1.33	-2.89
11,212.0	88.70	183.00	6,506.9	-4,427.1	1,369.6	4,633.1	1.61	-0.23	-1.59
11,257.0	89.20	182.50	6,507.7	-4,472.0	1,367.4	4,675.7	1.57	1.11	-1.11
11,302.0	87.50	181.10	6,509.0	-4,517.0	1,366.0	4,718.5	4.89	-3.78	-3.11
11,347.0	88.10	180.60	6,510.7	-4,561.9	1,365.3	4,761.6	1.74	1.33	-1.11
11,391.0	87.20	179.20	6,512.5	-4,605.9	1,365.4	4,803.9	3.78	-2.05	-3.18
11,433.0	87.60	179.70	6,514.4	-4,647.9	1,365.8	4,844.3	1.52	0.95	1.19
11,479.0	87.60	179.70	6,516.4	-4,693.8	1,366.1	4,888.5	0.00	0.00	0.00
4 1/2" Shoe Depth									
11,483.7	87.60	179.70	6,516.6	-4,698.5	1,366.1	4,893.1	0.00	0.00	0.00
BHL 470'FSL & 1600'FWL									
11,484.0	87.60	179.70	6,516.6	-4,698.8	1,366.1	4,893.3	0.00	0.00	0.00
TD Depth									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
BHL 470'FSL & 1600'	0.00	0.00	6,495.0	-4,699.5	1,349.3	1,366,657.53	3,293,592.69	40.335090	-104.446830
- survey misses target center by 27.3ft at 11483.7ft MD (6516.6 TVD, -4698.5 N, 1366.1 E)									
- Point									

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well Wetco Farms F-J-4HC
Project:	SEC.4-T4N-R63W	TVD Reference:	WELL @ 4581.0ft (Ensign 136 - RKB 12')
Site:	Wetco Farms F-J-4HC Pad Sec.4-T4N-R63W	MD Reference:	WELL @ 4581.0ft (Ensign 136 - RKB 12')
Well:	Wetco Farms F-J-4HC	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
711.0	709.4	9 5/8"	9-5/8	12-1/4	
7,105.0	6,489.2	7" Casing Shoe	7	8-3/4	
6,950.6	6,485.9	4 1/2" Liner Hanger Top	4-1/2	6	
11,479.0	6,516.4	4 1/2" Shoe Depth	4-1/2	6	

Survey Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
284.0	284.0	-0.6	0.8	KOP #1	
6,113.0	5,869.9	266.8	1,541.2	KOP #2	
11,484.0	6,516.6	-4,698.8	1,366.1	TD Depth	

Checked By: _____	Approved By: _____	Date: _____
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