Form 3160-5
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO 1004-0135
Expires July 31, 2010

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.

OCD Hobbs

SUBMIT IN TRIPLICATE - Other instructions on reverse side.

HOBBS OCD

OCT 02 2012

RECEIVED

1 Type of Well ☒ Oil Well ☐ Gas Well ☐ Other	5 Lease Serial No NMNM01917
	6 If Indian, Allottee or Tribe Name
	7 If Unit or CA/Agreement, Name and/or No
	8 Well Name and No. DOS EQUIS 12 FEDERAL COM 1
2 Name of Operator CIMAREX ENERGY COMPANY OF CO Contact TERRI STATHEM E-Mail tstathem@cimarex com	9. API Well No 30-025-40700-00-X1
3a Address 600 NORTH MARIENFELD STREET, SUITE 600 MIDLAND, TX 79701 3b Phone No. (include area code) Ph: 432-620-1936	10 Field and Pool, or Exploratory TRIPLE X
4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)* Sec 12 T24S R32E NENE 330FNL 810FEL	11. County or Parish, and State LEA COUNTY, NM

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other Change to Original APD
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13 Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones Attach the Bond under which the work will be performed or provide the Bond No on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection)

Cimarex Energy respectfully requests approval to change the total depth-measured & TVD, setting depth of the whipstock and plugback procedure of the pilot hole.

Approved:
Drill 8-3/4" pilot hole to 11400 and log Pump 30bbls MUDPUSHII 12ppg, followed by 495 sks Type H Cement, D080 (Dispersant) 0.080 gal/sk, D177 (Retarder) 0 045gal/sk17.5 ppg yield 0.94 & 0% Excess from 11400 to 10850 Set whipstock and kick off 8-3/4" lateral @ 10850 and drill to TD @ 15652 MD, 11250 TVD Run 5-1/2" 17# P-110 LTC from 0-15652 and cement

Proposed.
Drill 8-3/4" pilot hole to 11400 and log Pump 30 bbls MUDPUSHII 12 ppg, followed by 335 sks Type H

14 I hereby certify that the foregoing is true and correct

Electronic Submission #152402 verified by the BLM Well Information System
For CIMAREX ENERGY COMPANY OF CO, sent to the Hobbs
Committed to AFMSS for processing by CHRISTOPHER WALLS on 09/28/2012 (12CRW0025SE)

Name *(Printed/Typed)* TERRI STATHEM	Title REGULATORY ANALYST
Signature (Electronic Submission)	Date 09/28/2012

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By CHRISTOPHER WALLS	Title PETROLEUM ENGINEER	Date 09/28/2012
Conditions of approval, if any, are attached Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon	Office Hobbs	

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

**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ****

OCT 04 2012

Additional data for EC transaction #152402 that would not fit on the form

32. Additional remarks, continued

Cement, Halad 322 (Dispersant) 0 06% gal/sk, HR-601 (Retarder) 0.05% gal/sk 15 6 ppg yield 11.19 & 0% Excess from 11400 to 10582. Set whipstock w/ +/- 788' 2-7/8" tailpipe below whipstock and kick off 8-3/4" lateral @ 10582 and drill to TD @ 15412 MD, 11050 TVD. Run 5-1/2" 17# P-110 LTC from 0-15412 and cement - circ cmt to surface

BHL will remain the same as approved. Revised Dir plan attached

CIMAREX

Cimarex

Cactus 101

ST01 Rev.1

PATHFINDER
A Schlumberger Company

WELL	FIELD	STRUCTURE
Dos Equis 12 Federal Com #1H	NM Lea County	Cactus 101

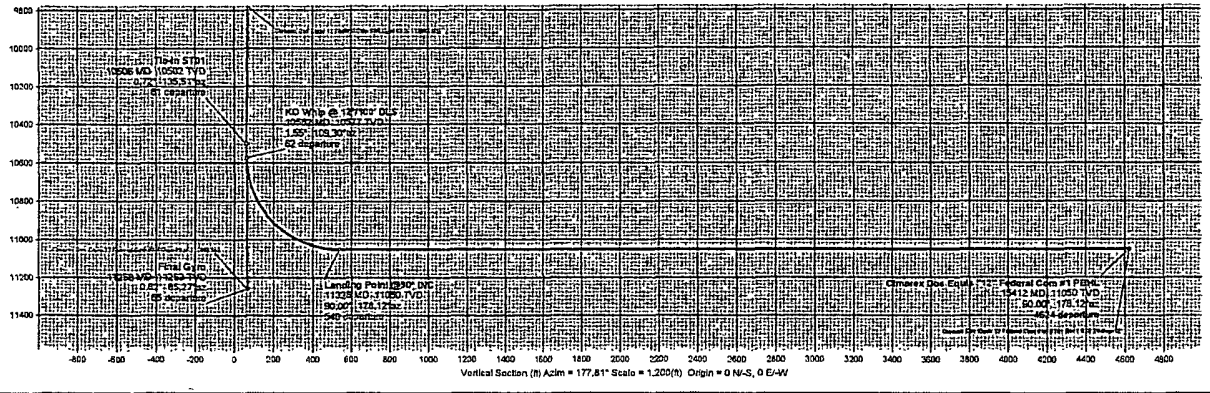
Magnetic Parameters				Surface Location				Miscellaneous	
Model	BGGM 2012	Dip	60.123°	Lat	N 32 14 18.909	Northing	451258.60 US$	Slot	Dos Equis 12 Federal Com #1H TVD Ref
		Mag Dec	7.559°	Lon	W 103 37 20.563	Easting	761153.10 US$	Plan	ST01 Rev1 BJF 28-Sep-12

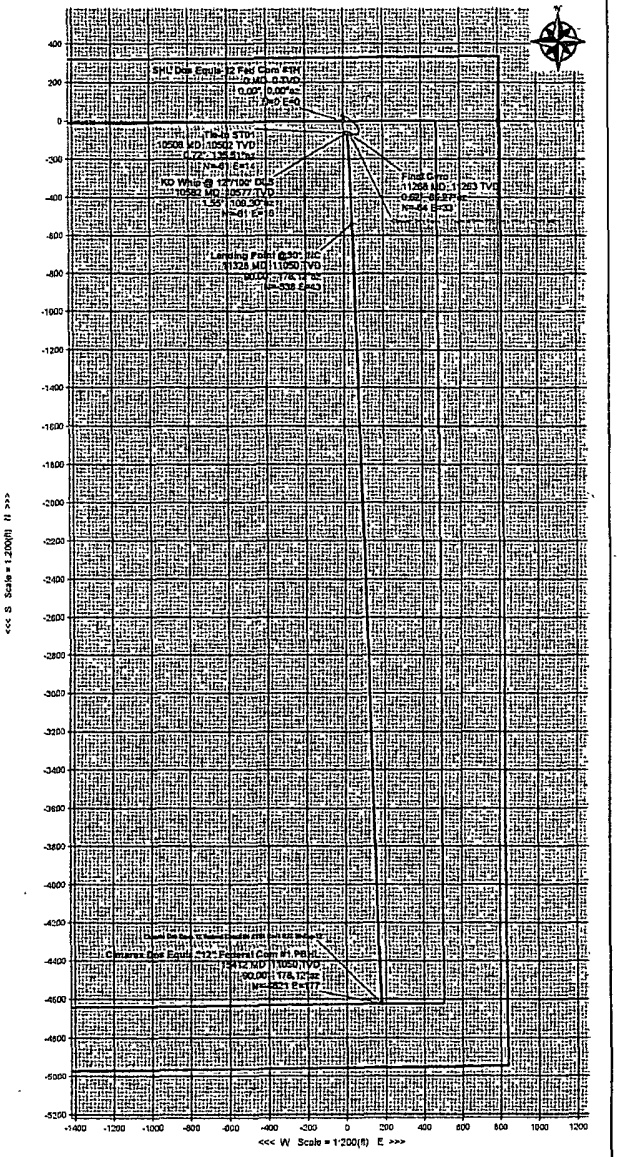
Grid North
Tot Corr (M->G 7.1802°)
Mag Dec (7.559°)
Grid Conv (0.379°)

Legend

Critical Points

Comments	Survey MD(ft)	Inclination(deg)	Azimuth(deg)	TVD(ft)	Sub-Sea TVD	VS(ft)	NS(ft)	EW(ft)	Latitude(deg)	Longitude(deg)	Easting(NUS)	Northing(NUS)	DLS(°/100ft)	Tool Face(deg)
SHL Dos Equis 12 Fed Com #1H	0.00	0.00	0.00	0.00	-3623.00	0.00	0.00	0.00	N 32 14 18.909	W 103 37 20.563	761153.10	451258.60		116.99
Tie-In ST01	10506.30	0.72	135.51	10501.52	6878.52	61.17	-60.68	14.22	N 32 14 18.308	W 103 37 20.422	761167.32	451197.93	1.31	109.30
KO Whip @ 12°/100' DLS	10582.00	1.55	109.30	10577.20	6954.20	61.90	-61.35	15.52	N 32 14 18.301	W 103 37 20.407	761168.62	451197.25	1.27	178.12
Landing Point @90° INC	11327.57	90.00	178.12	11050.00	7427.00	539.55	-536.30	43.08	N 32 14 13.560	W 103 37 20.123	761196.18	450720.32	12.00	-90.00
Cimarex Dos Equis "12" Federal Com #1 PBHL	15412.30	90.00	178.12	11050.00	7427.00	4624.22	-4620.83	176.69	N 32 13 33.175	W 103 37 18.680	761329.98	446637.94	0.00	





Drawn By	R. Schneider
Date Created	September 28, 2012 02:35:30 AM
Checked By	
Checked Date	
Approved By	
Approved Date	

Cimarex Dos Equis 12 Federal Com #1H ST01 Rev1 RJS 28-Sep-12 Proposal Report 100' Interpolated

(Non-Def Plan)

PATHFINDER
A Schlumberger Company

Report Date:	September 28, 2012 - 02:30 AM	**Survey / DLS Computation:**	Minimum Curvature / Lubinski
Client:	Cimarex	**Vertical Section Azimuth:**	177.810 ° (Grid North)
Field:	NM Lea County (NAD 83)	**Vertical Section Origin:**	0.000 ft, 0.000 ft
Structure / Slot:	Cactus 101 / Cimarex Dos Equis 12 Federal Com #1H	**TVD Reference Datum:**	RKB
Well:	Cimarex Dos Equis 12 Federal Com #1H	**TVD Reference Elevation:**	3623.000 ft above MSL
Borehole:	ST01	**Seabed / Ground Elevation:**	3606.000 ft above MSL
UWI / API#:	Unknown / Unknown	**Magnetic Declination:**	7.559 °
Survey Name:	Cimarex Dos Equis 12 Federal Com #1H ST01 Rev1 RJS 28-Sep-12	**Total Gravity Field Strength:**	999.1461 mgn (9.8 based)
Survey Date:	September 28, 2012	**Total Magnetic Field Strength:**	48486.578 nT
Tort / AHD / DDI / ERD Ratio:	127.180 ° / 4818.708 ft / 5.932 / 0.436	**Magnetic Dip Angle:**	60.123 °
Coordinate Reference System:	NAD83 New Mexico State Plane, Eastern Zone, US Feet	**Declination Date:**	September 07, 2012
Location Lat / Long:	N 32° 14' 18.90899", W 103° 37' 20.58316"	**Magnetic Declination Model:**	BGGM 2012
Location Grid N/E Y/X:	N 451258.600 ftUS, E 761153.100 ftUS	**North Reference:**	Grid North
CRS Grid Convergence Angle:	0.3793 °	**Grid Convergence Used:**	0.3793 °
Grid Scale Factor:	0.99996443	**Total Corr Mag North->Grid North:**	7.1802 °
		Local Coord Referenced To:	Well Head

Comments	MD (ft)	Incl (°)	Azm Grid (°)	TVD (ft)	TVDSS (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	BR (°/100ft)	TR (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
SHL Dos Equis 12 Fed Com #1H	0.00	0.00	0.00	0.00	-3623.00	0.00	0.00	0.00	N/A	N/A	N/A	451258.60	761153.10	N 32 14 18.91	W 103 37 20.58
	100.00	0.41	116.99	100.00	-3523.00	0.17	-0.16	0.32	0.41	0.41	0.00	451258.44	761153.42	N 32 14 18.91	W 103 37 20.58
	200.00	0.43	107.30	200.00	-3423.00	0.47	-0.44	1.00	0.07	0.02	-9.69	451258.16	761154.10	N 32 14 18.90	W 103 37 20.57
	300.00	0.68	110.96	299.99	-3323.01	0.83	-0.76	1.91	0.25	0.25	3.66	451257.84	761155.01	N 32 14 18.90	W 103 37 20.56
	400.00	0.56	106.68	399.99	-3223.01	1.22	-1.11	2.93	0.13	-0.12	-4.28	451257.49	761156.03	N 32 14 18.90	W 103 37 20.55
	500.00	0.39	102.23	499.98	-3123.02	1.47	-1.33	3.73	0.17	-0.17	-4.45	451257.27	761156.83	N 32 14 18.90	W 103 37 20.54
	602.30	0.42	115.75	602.28	-3020.72	1.73	-1.56	4.41	0.10	0.03	13.22	451257.04	761157.51	N 32 14 18.89	W 103 37 20.53
	697.60	0.37	104.12	697.58	-2925.42	1.98	-1.79	5.02	0.10	-0.05	-12.20	451256.81	761158.12	N 32 14 18.89	W 103 37 20.52
	792.80	0.36	93.06	792.78	-2830.22	2.09	-1.88	5.62	0.07	-0.01	-11.62	451256.72	761158.72	N 32 14 18.89	W 103 37 20.52
	888.00	0.30	78.48	887.97	-2735.03	2.08	-1.85	6.16	0.11	-0.06	-15.32	451256.75	761159.26	N 32 14 18.89	W 103 37 20.51
	983.30	0.12	20.67	983.27	-2639.73	1.95	-1.70	6.44	0.27	-0.19	-60.66	451256.90	761159.54	N 32 14 18.89	W 103 37 20.51
	1078.50	0.13	356.83	1078.47	-2544.53	1.75	-1.50	6.47	0.06	0.01	-25.04	451257.10	761159.57	N 32 14 18.89	W 103 37 20.51
	1173.70	0.12	338.64	1173.67	-2449.33	1.55	-1.30	6.43	0.04	-0.01	-19.11	451257.30	761159.53	N 32 14 18.90	W 103 37 20.51
	1269.00	0.23	341.53	1268.97	-2354.03	1.27	-1.03	6.33	0.12	0.12	3.03	451257.57	761159.43	N 32 14 18.90	W 103 37 20.51
	1364.20	0.48	334.72	1364.17	-2258.83	0.72	-0.48	6.10	0.27	0.26	-7.15	451258.12	761159.20	N 32 14 18.90	W 103 37 20.51
	1459.40	0.50	337.04	1459.37	-2163.63	-0.04	0.26	5.77	0.03	0.02	2.44	451258.86	761158.87	N 32 14 18.91	W 103 37 20.52
	1554.60	0.38	336.70	1554.56	-2068.44	-0.72	0.93	5.48	0.13	-0.13	-0.36	451259.53	761158.58	N 32 14 18.92	W 103 37 20.52
	1649.90	0.25	341.27	1649.86	-1973.14	-1.21	1.42	5.29	0.14	-0.14	4.80	451260.02	761158.39	N 32 14 18.92	W 103 37 20.52
	1745.10	0.28	349.12	1745.06	-1877.94	-1.64	1.84	5.18	0.05	0.03	8.25	451260.44	761158.28	N 32 14 18.93	W 103 37 20.52
	1840.30	0.36	4.38	1840.26	-1782.74	-2.17	2.37	5.16	0.12	0.08	16.03	451260.97	761158.26	N 32 14 18.93	W 103 37 20.52
	1935.60	0.45	15.66	1935.56	-1687.44	-2.82	3.03	5.28	0.13	0.09	11.84	451261.63	761158.38	N 32 14 18.94	W 103 37 20.52
	2030.80	0.47	10.36	2030.75	-1592.25	-3.56	3.77	5.45	0.05	0.02	-5.57	451262.37	761158.55	N 32 14 18.95	W 103 37 20.52
	2126.00	0.57	9.33	2125.95	-1497.05	-4.41	4.62	5.60	0.11	0.11	-1.08	451263.22	761158.70	N 32 14 18.95	W 103 37 20.52
	2221.30	0.68	10.53	2221.25	-1401.75	-5.42	5.65	5.78	0.12	0.12	1.26	451264.25	761158.88	N 32 14 18.96	W 103 37 20.52
	2316.50	0.61	16.30	2316.44	-1306.56	-6.45	6.69	6.03	0.10	-0.07	6.06	451265.29	761159.13	N 32 14 18.97	W 103 37 20.51
	2411.70	0.72	15.34	2411.63	-1211.37	-7.51	7.75	6.33	0.12	0.12	-1.01	451266.35	761159.43	N 32 14 18.99	W 103 37 20.51
	2506.90	0.74	7.05	2506.83	-1116.17	-8.68	8.94	6.56	0.11	0.02	-8.71	451267.54	761159.66	N 32 14 19.00	W 103 37 20.51
	2602.20	0.73	5.26	2602.12	-1020.88	-9.89	10.16	6.69	0.03	-0.01	-1.88	451268.75	761159.79	N 32 14 19.01	W 103 37 20.50
	2697.40	0.71	355.11	2697.31	-925.69	-11.08	11.35	6.70	0.14	-0.02	-10.66	451269.95	761159.80	N 32 14 19.02	W 103 37 20.50
	2792.60	0.62	336.80	2792.50	-830.50	-12.15	12.41	6.44	0.24	-0.09	-19.23	451271.01	761159.54	N 32 14 19.03	W 103 37 20.51
	2887.90	0.83	330.36	2887.80	-735.20	-13.25	13.48	5.90	0.24	0.22	-6.76	451272.08	761159.00	N 32 14 19.04	W 103 37 20.51
	2983.10	0.94	331.17	2982.98	-640.02	-14.56	14.77	5.18	0.12	0.12	0.85	451273.36	761158.28	N 32 14 19.05	W 103 37 20.52
	3078.30	1.04	333.02	3078.17	-544.83	-16.04	16.22	4.41	0.11	0.11	1.94	451274.82	761157.51	N 32 14 19.07	W 103 37 20.53

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	TVDSS (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	BR (°/100ft)	TR (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
	3173.60	1.15	331.34	3173.45	-449.55	-17.68	17.83	3.56	0.12	0.12	-1.76	451276.43	761156.66	N 32 14 19.09	W 103 37 20.54
	3268.80	1.22	324.84	3268.63	-354.37	-19.39	19.50	2.52	0.16	0.07	-6.83	451278.10	761155.62	N 32 14 19.10	W 103 37 20.55
	3364.00	1.46	325.31	3363.81	-259.19	-21.26	21.32	1.25	0.25	0.25	0.49	451279.92	761154.35	N 32 14 19.12	W 103 37 20.57
	3459.20	1.66	325.17	3458.97	-164.03	-23.44	23.45	-0.23	0.21	0.21	-0.15	451282.05	761152.87	N 32 14 19.14	W 103 37 20.58
	3554.50	1.55	322.22	3554.23	-68.77	-25.65	25.60	-1.81	0.14	-0.12	-3.10	451284.20	761151.29	N 32 14 19.16	W 103 37 20.60
	3649.70	1.33	316.60	3649.40	26.40	-27.53	27.42	-3.36	0.27	-0.23	-5.90	451286.02	761149.74	N 32 14 19.18	W 103 37 20.62
	3744.90	1.05	291.75	3744.58	121.58	-28.72	28.55	-4.93	0.61	-0.29	-26.10	451287.15	761148.17	N 32 14 19.19	W 103 37 20.64
	3840.20	0.83	296.26	3839.87	216.87	-29.40	29.18	-6.36	0.24	-0.23	4.73	451287.78	761146.74	N 32 14 19.20	W 103 37 20.65
	3935.40	0.89	309.07	3935.06	312.06	-30.22	29.95	-7.55	0.21	0.06	13.46	451288.55	761145.55	N 32 14 19.21	W 103 37 20.67
	4030.60	1.16	312.91	4030.24	407.24	-31.39	31.07	-8.83	0.29	0.28	4.03	451289.67	761144.27	N 32 14 19.22	W 103 37 20.68
	4125.90	0.80	329.27	4125.53	502.53	-32.65	32.30	-9.88	0.47	-0.38	17.17	451290.90	761143.22	N 32 14 19.23	W 103 37 20.70
	4221.10	0.74	84.95	4220.73	597.73	-33.27	32.93	-9.60	1.37	-0.06	121.51	451291.52	761143.50	N 32 14 19.24	W 103 37 20.69
	4316.30	1.42	99.54	4315.91	692.91	-33.06	32.78	-7.83	0.76	0.71	15.33	451291.38	761145.27	N 32 14 19.23	W 103 37 20.67
	4411.50	1.48	99.21	4411.08	788.08	-32.58	32.39	-5.45	0.06	0.06	-0.35	451290.99	761147.65	N 32 14 19.23	W 103 37 20.64
	4506.80	2.48	106.40	4506.32	883.32	-31.68	31.61	-2.26	1.08	1.05	7.54	451290.21	761150.84	N 32 14 19.22	W 103 37 20.61
	4602.00	3.79	116.72	4601.38	978.38	-29.50	29.62	2.53	1.49	1.38	10.84	451288.21	761155.63	N 32 14 19.20	W 103 37 20.55
	4697.20	4.25	119.25	4696.34	1073.34	-26.14	26.48	8.42	0.52	0.48	2.66	451285.08	761161.52	N 32 14 19.17	W 103 37 20.48
	4792.50	3.71	117.61	4791.41	1168.41	-22.76	23.32	14.23	0.58	-0.57	-1.72	451281.92	761167.33	N 32 14 19.14	W 103 37 20.42
	4887.70	3.12	120.59	4886.44	1263.44	-19.83	20.58	19.19	0.65	-0.62	3.13	451279.18	761172.29	N 32 14 19.11	W 103 37 20.36
	4982.90	2.76	123.34	4981.52	1358.52	-17.09	18.00	23.33	0.41	-0.38	2.89	451276.60	761176.43	N 32 14 19.09	W 103 37 20.31
	5078.10	2.78	126.79	5076.61	1453.61	-14.31	15.36	27.10	0.18	0.02	3.62	451273.96	761180.20	N 32 14 19.06	W 103 37 20.27
	5173.40	2.92	127.61	5171.79	1548.79	-11.30	12.49	30.87	0.15	0.15	0.86	451271.09	761183.97	N 32 14 19.03	W 103 37 20.22
	5268.60	3.61	125.01	5266.83	1643.83	-7.94	9.29	35.25	0.74	0.72	-2.73	451267.89	761188.35	N 32 14 19.00	W 103 37 20.17
	5363.80	4.34	119.22	5361.80	1738.80	-4.25	5.81	40.85	0.87	0.77	-6.08	451264.41	761193.95	N 32 14 18.96	W 103 37 20.11
	5459.10	2.27	123.22	5456.94	1833.94	-1.28	3.02	45.57	2.18	-2.17	4.20	451261.62	761198.67	N 32 14 18.94	W 103 37 20.05
	5554.30	1.28	135.69	5552.09	1929.09	0.61	1.23	47.89	1.11	-1.04	13.10	451259.83	761200.99	N 32 14 18.92	W 103 37 20.03
	5649.50	1.29	136.60	5647.27	2024.27	2.20	-0.31	49.37	0.02	0.01	0.96	451258.29	761202.47	N 32 14 18.90	W 103 37 20.01
	5744.80	1.21	132.57	5742.55	2119.55	3.72	-1.77	50.85	0.12	-0.08	-4.23	451256.83	761203.95	N 32 14 18.89	W 103 37 19.99
	5840.00	1.32	133.60	5837.72	2214.72	5.21	-3.21	52.38	0.12	0.12	1.08	451255.39	761205.48	N 32 14 18.87	W 103 37 19.97
	5935.20	1.21	134.54	5932.90	2309.90	6.73	-4.67	53.90	0.12	-0.12	0.99	451253.93	761206.99	N 32 14 18.86	W 103 37 19.96
	6030.40	1.13	136.67	6028.08	2405.08	8.17	-6.06	55.26	0.10	-0.08	2.24	451252.54	761208.35	N 32 14 18.85	W 103 37 19.94
	6125.70	1.03	133.01	6123.36	2500.36	9.48	-7.33	56.53	0.13	-0.10	-3.84	451251.27	761209.62	N 32 14 18.83	W 103 37 19.93
	6220.90	1.04	131.56	6218.55	2595.55	10.69	-8.48	57.80	0.03	0.01	-1.52	451250.12	761210.90	N 32 14 18.82	W 103 37 19.91
	6316.10	1.00	130.17	6313.73	2690.73	11.84	-9.59	59.08	0.05	-0.04	-1.46	451249.01	761212.18	N 32 14 18.81	W 103 37 19.90
	6411.40	1.01	130.48	6409.02	2786.02	12.97	-10.67	60.35	0.01	0.01	0.33	451247.93	761213.45	N 32 14 18.80	W 103 37 19.88
	6506.60	1.01	129.13	6504.20	2881.20	14.10	-11.75	61.64	0.02	0.00	-1.42	451246.85	761214.74	N 32 14 18.79	W 103 37 19.87
	6601.80	0.95	127.60	6599.39	2976.39	15.15	-12.76	62.92	0.07	-0.06	-1.61	451245.84	761216.02	N 32 14 18.78	W 103 37 19.85
	6697.10	0.85	126.67	6694.68	3071.68	16.10	-13.66	64.11	0.11	-0.10	-0.98	451244.94	761217.21	N 32 14 18.77	W 103 37 19.84
	6792.30	0.77	129.57	6789.87	3166.87	16.97	-14.49	65.17	0.09	-0.08	3.05	451244.11	761218.27	N 32 14 18.76	W 103 37 19.83
	6887.50	0.84	135.16	6885.06	3262.06	17.91	-15.40	66.16	0.11	0.07	5.87	451243.21	761219.25	N 32 14 18.75	W 103 37 19.81
	6982.80	0.95	142.79	6980.35	3357.35	19.07	-16.52	67.13	0.17	0.12	8.01	451242.08	761220.23	N 32 14 18.74	W 103 37 19.80
	7078.00	0.99	146.68	7075.53	3452.53	20.42	-17.84	68.06	0.08	0.04	4.09	451240.76	761221.15	N 32 14 18.73	W 103 37 19.79
	7173.20	1.04	154.87	7170.72	3547.72	21.92	-19.31	68.88	0.16	0.05	8.60	451239.30	761221.97	N 32 14 18.71	W 103 37 19.78
	7268.40	1.07	153.16	7265.90	3642.90	23.53	-20.88	69.64	0.05	0.03	-1.80	451237.72	761222.74	N 32 14 18.70	W 103 37 19.77
	7363.70	1.10	149.28	7361.19	3738.19	25.14	-22.46	70.51	0.08	0.03	-4.07	451236.14	761223.61	N 32 14 18.68	W 103 37 19.76
	7458.90	1.19	153.91	7456.37	3833.37	26.85	-24.13	71.41	0.14	0.09	4.86	451234.47	761224.51	N 32 14 18.67	W 103 37 19.75
	7554.10	1.20	153.94	7551.55	3928.55	28.66	-25.92	72.29	0.01	0.01	0.03	451232.68	761225.38	N 32 14 18.65	W 103 37 19.74
	7649.40	1.17	160.52	7646.83	4023.83	30.50	-27.73	73.05	0.15	-0.03	6.90	451230.87	761226.15	N 32 14 18.63	W 103 37 19.73
	7744.60	1.28	161.65	7742.00	4119.00	32.45	-29.66	73.71	0.12	0.12	1.19	451228.94	761226.81	N 32 14 18.61	W 103 37 19.73
	7839.80	1.39	164.57	7837.18	4214.18	34.60	-31.78	74.35	0.14	0.12	3.07	451226.82	761227.45	N 32 14 18.59	W 103 37 19.72
	7935.10	1.54	164.62	7932.45	4309.45	36.97	-34.13	75.00	0.16	0.16	0.05	451224.47	761228.10	N 32 14 18.57	W 103 37 19.71
	8030.30	1.58	162.85	8027.61	4404.61	39.48	-36.62	75.72	0.07	0.04	-1.86	451221.99	761228.82	N 32 14 18.54	W 103 37 19.70
	8125.50	1.52	166.68	8122.78	4499.78	41.99	-39.10	76.40	0.13	-0.06	4.02	451219.50	761229.50	N 32 14 18.52	W 103 37 19.70
	8220.70	1.56	168.62	8217.94	4594.94	44.51	-41.60	76.95	0.07	0.04	2.04	451217.00	761230.05	N 32 14 18.49	W 103 37 19.69
	8316.00	1.55	171.18	8313.21	4690.21	47.07	-44.14	77.40	0.07	-0.01	2.69	451214.46	761230.50	N 32 14 18.47	W 103 37 19.69
	8411.20	1.60	175.27	8408.37	4785.37	49.68	-46.74	77.71	0.13	0.05	4.30	451211.86	761230.81	N 32 14 18.44	W 103 37 19.68
	8506.40	1.56	180.14	8503.54	4880.54	52.30	-49.36	77.82	0.15	-0.04	5.12	451209.24	761230.91	N 32 14 18.42	W 103 37 19.68
	8601.70	1.56	182.42	8598.80	4975.80	54.89	-51.95	77.76	0.07	0.00	2.39	451206.65	761230.85	N 32 14 18.39	W 103 37 19.68
	8696.90	1.53	187.27	8693.97	5070.97	57.43	-54.51	77.54	0.14	-0.03	5.09	451204.09	761230.64	N 32 14 18.36	W 103 37 19.68
	8792.10	1.48	192.73	8789.13	5166.13	59.87	-56.97	77.11	0.16	-0.05	5.74	451201.63	761230.21	N 32 14 18.34	W 103 37 19.69

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	TVDSS (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	BR (°/100ft)	TR (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
	8887 40	1.40	196 84	8884.40	5261.40	62.16	-59.28	76 50	0 14	-0.08	4.31	451199.32	761229 60	N 32 14 18.32	W 103 37 19.70
	8982 60	1 44	210 07	8979 57	5356.57	64.27	-61.43	75.57	0 35	0 04	13 90	451197 17	761228.66	N 32 14 18 30	W 103 37 19.71
	9077 80	1.59	230 05	9074.74	5451 74	66 09	-63 32	73 95	0 57	0.16	20.99	451195 29	761227 05	N 32 14 18 28	W 103 37 19 73
	9173 00	1.60	242.36	9169 90	5546.90	67 47	-64 78	71 76	0 36	0.01	12 93	451193.62	761224 86	N 32 14 18.26	W 103 37 19.75
	9268 30	2 02	251 26	9265.16	5642 16	68.52	-65 94	68 99	0 53	0 44	9.34	451192 67	761222 09	N 32 14 18 25	W 103 37 19 78
	9363 50	2 47	256 39	9360 28	5737.28	69.41	-66.96	65 41	0 52	0 47	5.39	451191.64	761218.51	N 32 14 18 24	W 103 37 19.83
	9458 70	2 87	258 48	9455 38	5832 38	70 20	-67 92	61 08	0.43	0.42	2.20	451190 69	761214.18	N 32 14 18 23	W 103 37 19.88
	9554.00	3 02	279.75	9550.56	5927.56	70 07	-67 97	56.27	1 15	0.16	22 32	451190 63	761209.37	N 32 14 18 23	W 103 37 19.93
	9649.20	3 25	274 82	9645.62	6022 62	69 22	-67 32	51.11	0.37	0.24	-5 18	451191.29	761204.21	N 32 14 18 24	W 103 37 19.99
	9744.40	2 82	264 30	9740 68	6117 68	69 03	-67.32	46.09	0 74	-0 45	-11 05	451191.28	761199 19	N 32 14 18 24	W 103 37 20.05
	9839.60	2 69	271 89	9835.77	6212 77	69 02	-67 48	41 53	0,41	-0,14	7,97	451191 12	761194 63	N 32 14 18.24	W 103 37 20 10
	9934.90	4 00	275 89	9930 91	6307.91	68 39	-67 07	35 99	1.40	1.37	4 20	451191.54	761189.08	N 32 14 18.24	W 103 37 20.17
	10030.10	5 35	276 49	10025 79	6402 79	67.26	-66 22	28.27	1.42	1.42	0 63	451192.38	761181 37	N 32 14 18.25	W 103 37 20 26
	10125 30	3 99	279 57	10120 67	6497 67	65 91	-65 17	20 60	1.45	-1 43	3 24	451193.43	761173 70	N 32 14 18.26	W 103 37 20.35
	10220 60	1.33	319 87	10215 87	6592 87	64 36	-63 77	16 61	3 25	-2 79	42.29	451194.83	761169.71	N 32 14 18.28	W 103 37 20.39
	10315.80	1 55	328 50	10311 04	6688 04	62 37	-61 83	15 23	0 32	0 23	9.07	451196.77	761168 33	N 32 14 18.30	W 103 37 20 41
	10411.00	0 54	302 80	10406 22	6783 22	60.99	-60 49	14 18	1 14	-1 06	-27.00	451198 11	761167.28	N 32 14 18 31	W 103 37 20 42
Tie-In ST01	10506.30	0 72	135 51	10501.52	6878.52	61 17	-60 68	14.22	N/A	0 19	-175 54	451197.93	761167.32	N 32 14 18 31	W 103 37 20.42
KO Whip @ 12°/100' DLS	10582 00	1.55	109 30	10577 20	6954 20	61.90	-61.35	15 52	1.27	1.10	-34 62	451197.25	761168 62	N 32 14 18.30	W 103 37 20.41
	10600.00	3.08	150 15	10595 19	6972 19	62.42	-61.85	15 99	12.00	8 50	226.95	451196.75	761169 09	N 32 14 18.30	W 103 37 20.40
	10700.00	14.78	172 64	10693 82	7070 82	77.56	-76 89	18.97	12 00	11 71	22 49	451181.71	761172 07	N 32 14 18.15	W 103 37 20 37
	10800.00	26 75	175 25	10787.16	7164 16	112.88	-112.10	22 48	12.00	11.96	2.62	451146.50	761175.58	N 32 14 17.80	W 103 37 20 33
	10900.00	38.73	178 32	10871 12	7248.12	166.83	-165 94	26 37	12 00	11 98	1.07	451092 66	761179 47	N 32 14 17 27	W 103 37 20 29
	11000 00	50.72	176.94	10942.04	7319 04	237.06	-236 06	30 45	12 00	11 99	0 62	451022 54	761183 55	N 32 14 16 57	W 103 37 20 25
	11100 00	62 71	177 38	10996.82	7373 82	320 49	-319 40	34.57	12 00	11 99	0 44	450939 21	761187.67	N 32 14 15 75	W 103 37 20 21
	11200 00	74 70	177.73	11033 07	7410.07	413 49	-412.32	38.53	12 00	11 99	0 35	450846 29	761191.62	N 32 14 14 83	W 103 37 20.17
	11300 00	86 69	178 04	11049 20	7426 20	512 00	-510.76	42.16	12 00	11.99	0 31	450747 86	761195.26	N 32 14 13.85	W 103 37 20 13
Landing Point @90° INC	11327.57	90 00	178 12	11050 00	7427.00	539.55	-538.30	43 08	12 00	11.99	0 30	450720 32	761196.18	N 32 14 13 58	W 103 37 20.12
	11400 00	90 00	178 12	11050 00	7427.00	611 98	-610.89	45 45	0 00	0 00	0 00	450647.93	761198 55	N 32 14 12 86	W 103 37 20 10
	11500 00	90.00	178 12	11050 00	7427 00	711.98	-710 64	48.72	0 00	0 00	0 00	450547.99	761201 82	N 32 14 11 87	W 103 37 20.07
	11600 00	90 00	178 12	11050 00	7427 00	811 98	-810 58	52 00	0 00	0 00	0 00	450448 05	761205.10	N 32 14 10 88	W 103 37 20 04
	11700 00	90 00	178 12	11050 00	7427.00	911 98	-910 53	55 27	0 00	0 00	0.00	450348 10	761208 37	N 32 14 9.90	W 103 37 20.01
	11800 00	90.00	178 12	11050 00	7427 00	1011 98	-1010.48	58 55	0 00	0.00	0 00	450248 16	761211.64	N 32 14 8.91	W 103 37 19 98
	11900.00	90.00	178.12	11050 00	7427 00	1111.97	-1110 42	61.82	0 00	0 00	0.00	450148.22	761214 92	N 32 14 7.92	W 103 37 19.95
	12000.00	90 00	178.12	11050.00	7427.00	1211 97	-1210 37	65.09	0 00	0 00	0 00	450048.28	761218 19	N 32 14 6.93	W 103 37 19.92
	12100 00	90 00	178 12	11050.00	7427.00	1311.97	-1310.32	68 37	0 00	0.00	0.00	449948.33	761221.47	N 32 14 5.94	W 103 37 19.89
	12200.00	90.00	178.12	11050 00	7427.00	1411 97	-1410.26	71 64	0 00	0.00	0 00	449848.39	761224 74	N 32 14 4.95	W 103 37 19.86
	12300.00	90.00	178 12	11050 00	7427.00	1511.97	-1510 21	74.92	0 00	0.00	0.00	449748 45	761228 01	N 32 14 3 96	W 103 37 19.83
	12400.00	90 00	178 12	11050.00	7427.00	1611 97	-1610 15	78 19	0 00	0 00	0 00	449648.51	761231 29	N 32 14 2.97	W 103 37 19.80
	12500 00	90.00	178 12	11050.00	7427.00	1711.96	-1710 10	81.47	0 00	0 00	0 00	449548.56	761234.56	N 32 14 1 98	W 103 37 19.77
	12600 00	90 00	178 12	11050.00	7427.00	1811.96	-1810 05	84 74	0 00	0 00	0 00	449448 62	761237 84	N 32 14 0.99	W 103 37 19 74
	12700 00	90.00	178.12	11050.00	7427.00	1911.96	-1909 99	88.02	0.00	0.00	0 00	449348.68	761241 11	N 32 14 0.00	W 103 37 19 71
	12800 00	90.00	178 12	11050 00	7427 00	2011 96	-2009 94	91 29	0 00	0 00	0 00	449248 74	761244.39	N 32 13 59.01	W 103 37 19.68
	12900 00	90 00	178 12	11050.00	7427 00	2111.96	-2109 89	94.57	0 00	0.00	0 00	449148 79	761247 66	N 32 13 58.03	W 103 37 19.64
	13000 00	90 00	178.12	11050.00	7427.00	2211 96	-2209 83	97 84	0.00	0.00	0 00	449048 85	761250 94	N 32 13 57.04	W 103 37 19.61
	13100 00	90 00	178 12	11050 00	7427.00	2311.96	-2309 78	101 12	0.00	0.00	0.00	448948.91	761254 21	N 32 13 56 05	W 103 37 19 58
	13200 00	90 00	178 12	11050.00	7427.00	2411 95	-2409.73	104 39	0 00	0.00	0.00	448848 97	761257 49	N 32 13 55.06	W 103 37 19 55
	13300 00	90.00	178 12	11050 00	7427 00	2511.95	-2509.67	107.67	0 00	0 00	0.00	448749.02	761260 77	N 32 13 54 07	W 103 37 19 52
	13400.00	90 00	178 12	11050 00	7427.00	2611 95	-2609 62	110.95	0 00	0 00	0 00	448649.08	761264.04	N 32 13 53 08	W 103 37 19 49
	13500 00	90.00	178.12	11050 00	7427 00	2711.95	-2709 56	114.22	0 00	0 00	0 00	448549.14	761267.32	N 32 13 52 09	W 103 37 19 46
	13600 00	90 00	178.12	11050.00	7427.00	2811 95	-2809 51	117.50	0.00	0 00	0 00	448449.19	761270 59	N 32 13 51.10	W 103 37 19 43
	13700 00	90 00	178.12	11050.00	7427 00	2911.95	-2909 46	120.77	0 00	0.00	0 00	448349.25	761273 87	N 32 13 50 11	W 103 37 19.40
	13800 00	90 00	178 12	11050 00	7427.00	3011 95	-3009 40	124 05	0 00	0 00	0.00	448249.31	761277.15	N 32 13 49 12	W 103 37 19.37
	13900 00	90.00	178 12	11050 00	7427 00	3111 94	-3109 35	127 33	0 00	0 00	0 00	448149.37	761280.42	N 32 13 48.13	W 103 37 19 34
	14000 00	90 00	178.12	11050 00	7427 00	3211 94	-3209 30	130 60	0 00	0 00	0 00	448049 42	761283 70	N 32 13 47 14	W 103 37 19.31
	14100 00	90.00	178 12	11050 00	7427.00	3311 94	-3309 24	133 88	0 00	0 00	0 00	447949.48	761286.97	N 32 13 46 16	W 103 37 19.28
	14200 00	90.00	178.12	11050 00	7427 00	3411 94	-3409 19	137.16	0 00	0 00	0 00	447849 54	761290 25	N 32 13 45.17	W 103 37 19 25
	14300 00	90 00	178 12	11050.00	7427.00	3511.94	-3509 13	140.43	0 00	0.00	0.00	447749 60	761293.53	N 32 13 44 18	W 103 37 19 22

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	TVDSS (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	BR (°/100ft)	TR (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
	14400 00	90.00	178 12	11050.00	7427 00	3611.94	-3609.08	143.71	0 00	0.00	0 00	447649 65	761296.80	N 32 13 43 19	W 103 37 19 19
	14500 00	90 00	178 12	11050 00	7427.00	3711.94	-3709.03	146.99	0 00	0 00	0.00	447549 71	761300 08	N 32 13 42.20	W 103 37 19.16
	14600.00	90 00	178 12	11050 00	7427 00	3811 93	-3808 97	150.26	0 00	0 00	0 00	447449 77	761303.36	N 32 13 41.21	W 103 37 19 13
	14700 00	90 00	178 12	11050.00	7427.00	3911 93	-3908 92	153.54	0 00	0 00	0.00	447349 83	761306 63	N 32 13 40.22	W 103 37 19.10
	14800 00	90 00	178 12	11050.00	7427.00	4011.93	-4008 87	156 82	0 00	0 00	0.00	447249.88	761309 91	N 32 13 39.23	W 103 37 19.07
	14900.00	90 00	178.12	11050 00	7427 00	4111 93	-4108.81	160 10	0 00	0 00	0.00	447149.94	761313.19	N 32 13 38 24	W 103 37 19.04
	15000.00	90 00	178 12	11050 00	7427 00	4211.93	-4208 76	163 37	0.00	0 00	0 00	447050 00	761316.47	N 32 13 37.25	W 103 37 19 01
	15100.00	90 00	178 12	11050.00	7427 00	4311.93	-4308 71	166 65	0 00	0.00	0 00	446950 06	761319.74	N 32 13 36 26	W 103 37 18 98
	15200 00	90 00	178 12	11050.00	7427 00	4411.92	-4408 65	169 93	0 00	0 00	0 00	446850.11	761323 02	N 32 13 35.27	W 103 37 18.94
	15300.00	90 00	178.12	11050 00	7427.00	4511.92	-4508.60	173.21	0 00	0 00	0 00	446750 17	761326 30	N 32 13 34.29	W 103 37 18.91
	15400.00	90 00	178 12	11050 00	7427 00	4611 92	-4608 54	176.48	0 00	0 00	0 00	446650.23	761329 58	N 32 13 33.30	W 103 37 18 88
Cimarex Dos Equis "12" Federal Com #1 PBHL	15412 30	90 00	178 12	11050 00	7427.00	4624 22	-4620 83	176.89	0 00	0 00	0.00	446637 94	761329.98	N 32 13 33.17	W 103 37 18 88

Survey Type: Non-Def Plan

Survey Error Model: ISCWSA Rev 0 *** 3-D 95 000% Confidence 2 7955 sigma
Survey Program:

Description	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Survey Tool Type	Borehole / Survey
	0 000	17 000	Act Stns	30 000	30 000	SLB_NSG+MSHOT-Depth Only	Original Borehole / Cimarex Dos Equis 12 Federal Com #1H Gyro 0ft to 11268ft MD
	17.000	10506 300	Act Stns	30 000	30.000	SLB_NSG+MSHOT	Original Borehole / Cimarex Dos Equis 12 Federal Com #1H Gyro
	10506 300	15412 296	1/100.000	30.000	30.000	SLB_MWD-STD	ST01 / Cimarex Dos Equis 12 Federal Com #1H ST01 Rev1